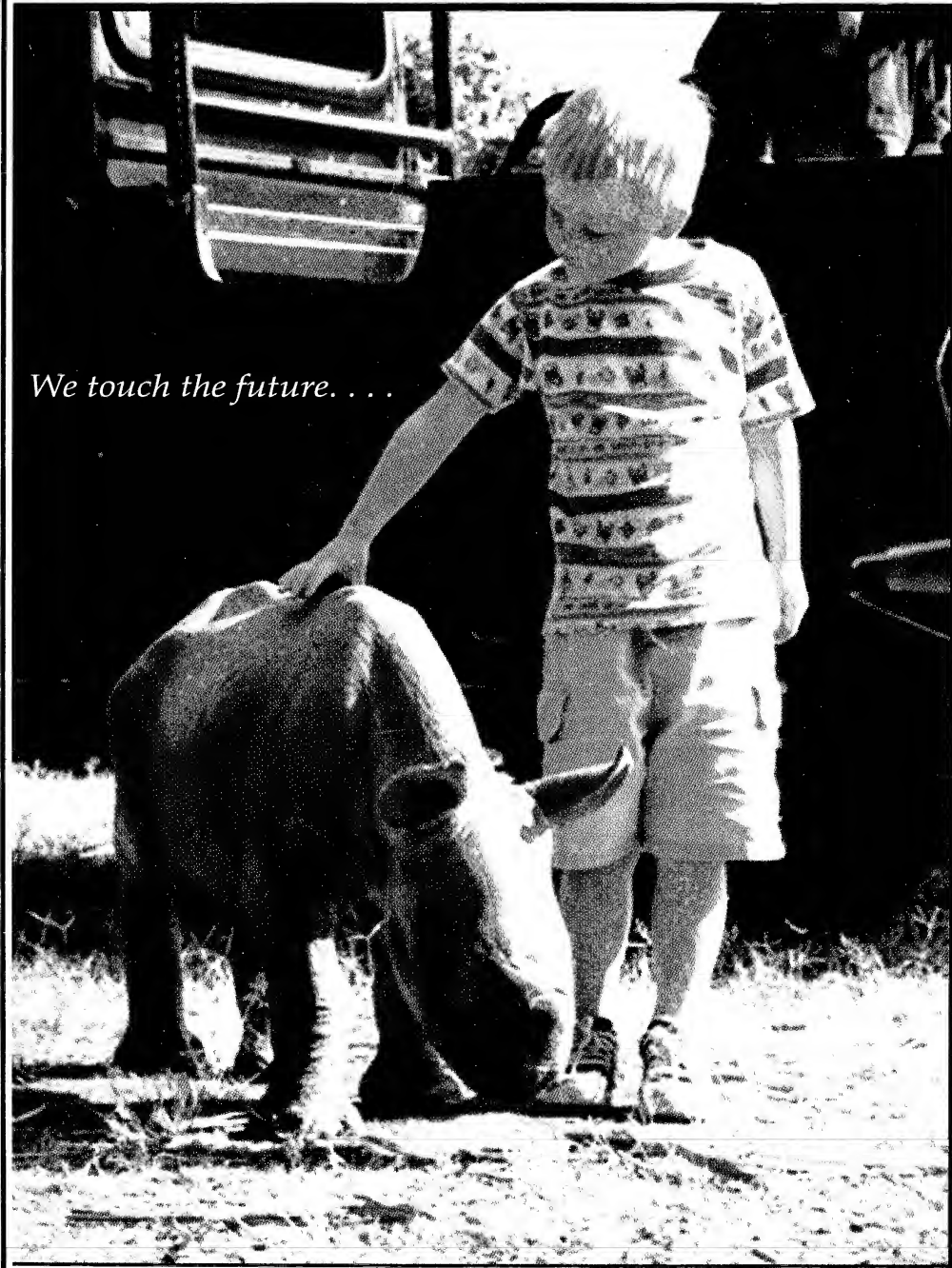


ANIMAL KEEPERS' FORUM

We touch the future. . . .



SEPTEMBER 2008

The Journal of the American
Association of Zoo Keepers, Inc.

AKF Managing Editor: Susan D. Chan • **Associate Editors** • Kayla Grams, Lovell, WY; Mark de Denus, Winnipeg, MB • **Enrichment Options Coordinator:** Rachel Daneault, Disney's Animal Kingdom • **Legislative/Conservation Outlook Column Co-Coordinators:** Becky Richendollar, North Carolina Zoo and Greg McKinney, Philadelphia, PA • **Reactions Column Coordinator:** William K. Baker, Jr., Abilene Zoo, Abilene, TX • **ATC Column Coordinators:** Angela Binney, Disney's Animal Kingdom; Kim Kezer, Zoo New England; Jay Pratte, Zoo Atlanta • **Proofreader:** Barbara Manspeaker, AAZK Administrative Office.

Animal Keepers' Forum is published monthly by the American Association of Zoo Keepers, Inc., 3601 S.W. 29th Street, Suite 133, Topeka, KS 66614-2054. Ten dollars of each membership fee goes toward the annual publication costs of Animal Keepers' Forum. Postage paid at Topeka, KS.

AAZK Executive Director: Ed Hansen, AAZK, Inc., Topeka KS

also serves as AAZK Liaison to the American Zoo & Aquarium Association (AZA)

AAZK Administrative Secretary: Barbara Manspeaker, AAZK, Inc., Topeka, KS

BOARD OF DIRECTORS

Shane Good, Cleveland Metroparks Zoo, Cleveland, OH 44109

President

Denise Wagner, The Phoenix Zoo, Phoenix, AZ 85008

Vice President

Jacque Blessington, Kansas City Zoo, Kansas City, MO 64132-4200

Tammy Root, Indianapolis Zoo, Indianapolis, IN 46222

Bob Cisneros, San Diego Zoo, San Diego, CA 92112-0551

COMMITTEES/COORDINATORS

By-laws

Chair - Gisela A. Wiggins, North Carolina Zoo

Grants Committee

Chair - Shelly Roach, Columbus Zoo

Enrichment Committee

Co-Chairs - Dawn Neptune, Utah's Hogle Zoo
and Amy Burgess, Disney's Animal Kingdom

Annual Conferences

Coordinator - Ed Hansen, AAZK, Inc.

Professional Development

Chair - Tammy Schmidt, Peoria Zoo

ICZ Coordinators

Shane Good, Cleveland Metroparks Zoo and
Norah Farnham, Woodland Park Zoo

Ethics

Chair - Denise Wagner, The Phoenix Zoo

Awards

Chair - Janet McCoy, The Oregon Zoo

Marketing Resources

Vacant

Animal Training Committee

Co-Chairs - Angela Binney, Disney's Animal
Kingdom & Kim Kezer, Zoo New England

Bowling for Rhinos -

Coordinator - Patty Pearthree, Cary, NC

Conservation Committee Co-Chairs

Amanda Kamradt, Houston Zoo and
Penny Jolly, Disney's Animal Kingdom

MEMBERSHIP SERVICES

ADT, EDT and ATD Forms

AAZK Administrative Offices/Topeka

AAZK Website - Liaison to Webmaster

Denise Wagner, The Phoenix Zoo

AAZK Historian

Mark Levin, Plymouth Meeting, PA

AAZK Publications/Logo Products

AAZK Administrative Offices/Topeka

Table of Contents

About the Cover/Information for Contributors.....	338
Scoops & Scuttlebutt.....	339 - 341
From the President.....	342 - 343
Coming Events.....	344
Conservation Station.....	346
AAZK Announces New Members.....	348
BFR Winners See Rhino Conservation Close-up at Indonesian National Parks.....	349 - 351
From Education to Motivation - How Are You Celebrating Year of the Polar Bear '08?.....	352 - 354
A Huge Thank You to the Gold Sponsors of the 2008 AAZK Conference!.....	356 - 358
Snow Leopard Enterprise: <i>A conservation program that saves endangered species and supports needy families.....</i>	359 - 364
AAZK Logo Fleece Now Available.....	366
Wild Orangutans Declining More Sharply in Sumatra and Borneo Than Previously Thought....	367 - 369
Orangutans and Palm Oil: What You Can Do to Help.....	370 - 371
An AAZK CPR Grant Project: <i>Houston Zoo North American River Otter Latrine Survey.....</i>	372 - 376
It's Easy to be Green! <i>Samples of Environmental Awareness at the 2008 AAZK Conference.....</i>	377 - 378
Endangered Deer Released in Thailand.....	378
Gorilla Find in Congo Stuns Primatologists ~ Gives Hope for Species' Future.....	379 - 380
Human Ovulation Predictor Test Kits Found Non Responsive in Detecting Orangutan Ovulation.....	381 - 384
Zoo's Panda Population Drastically Reduced Following Earthquake in China.....	384
ATC Column: Training Tips: Who's Watching Who?.....	385 - 387
Tampa's Lowry Park Zoo Explores Solar Power.....	387
Pangolins in Trouble - Future Uncertain.....	388 - 389
2007 AAZK Conference Proceedings Now Available for Download.....	389
Conservation/Legislative Update.....	390 - 392



34th Anniversary - 1974 - 2008

MISSION STATEMENT

American Association of Zoo Keepers, Inc.

To provide a resource and a forum of continuing education for the animal care professional and to support zoo and aquarium personnel in their roles as animal care givers, scientific researchers, public educators and conservationists. To promote zoos and aquariums as cultural establishments dedicated to the enrichment of human and natural resources; to foster the exchange of research materials, enrichment options and husbandry information through publications and conferences which will lead to a greater understanding of the needs and requirements of all animals.

During the last century, the critically endangered black rhino (Diceros bicornis) has suffered the most dramatic decline in total numbers of all rhino species. Between 1970 and 1992, the population of this species decreased by 96%. In 1970, it was estimated that there were approximately 65,000 black rhinos in Africa. By 1993, there were only 2,300 surviving in the wild. Due to intensive anti-poaching efforts and conservation organizations such as AAZK, numbers have been recovering slowly. Today, there are approximately 4,180 black rhinos. Through Bowling for Rhinos, AAZK paid for the fence to be built around Lewa with a five-mile wide corridor to the North for the migratory animals to wander in and out. Prior to that, the farmers to the south feared and hated elephants because the elephants would raid their crops at night and a whole year's livelihood would be destroyed. When the fence was built, they were so happy and could not believe that people from around the world helped them. They now help protect the elephants and other wildlife because they live alongside the wildlife and benefit when Lewa Wildlife Conservancy builds schools, hospitals, provide jobs, etc. In return they have come to love and appreciate the wildlife.

Most people envisioned Kenya as being wide open grasslands with a few small farms scattered here and there (like in the movie "Out of Africa"). Quite the opposite is true. It is farm after farm on every inch of available land, even on steep slopes with a few patches of wildlife areas in between. Conservationist's goals are to connect the dots of wildlife areas. Lewa sits at the northern edge of the farmlands where the soil was too dry to be suitable for farmland and so it was left for wildlife. Featured on the cover is Danny Pearthree and female black rhino calf Lorangoi. This calf's mother was nearly blind and kept losing track of her offspring, thus Lorangoi was hand-reared by sanctuary staff. This rhino has since been released back into the protected area of Lewa and is doing well. It is youngsters like Danny who will hopefully carry on the vital conservation work into the next generation. We do indeed touch the future. (Photo provided by Patty Pearthree).

Articles sent to *Animal Keepers' Forum* will be reviewed by the editorial staff for publication. Articles of a research or technical nature will be submitted to one or more of the zoo professionals who serve as referees for *AKE*. No commitment is made to the author, but an effort will be made to publish articles as soon as possible. Lengthy articles may be separated into monthly installments at the discretion of the editor. The editor reserves the right to edit material without consultation unless approval is requested in writing by the author. Materials submitted will not be returned unless accompanied by a stamped, self-addressed, appropriately-sized envelope. Telephone, fax or email contributions of late-breaking news or last-minute insertions are accepted as space allows. Phone 785-273-9149; FAX (785) 273-1980; email is akfeditor@zk.kscoxmail.com< If you have questions about submission guidelines, please contact the Editor.

Deadline for each regular issue is the 10th of the preceding month.

Dedicated issues may have separate deadline dates and will be noted by the editor.

Articles printed do not necessarily reflect the opinions of the *AKE* staff or the American Association of Zoo Keepers, Inc. Publication does not indicate endorsement by the Association.

Items in this publication may be reprinted providing credit to this publication is given and a copy of the reprinted material is forwarded to the editor. If an article is shown to be separately copyrighted by the author(s), then permission must be sought from the author(s). Reprints of material appearing in this journal may be ordered from the editor. Regular back issues are available for \$4.00 each. Special issues may cost more.

E-Mail Addresses:

You may reach Barbara Manspeaker at AAZK Administrative Offices at: aazkoffice@zk.kscoxmail.com<

You may reach Susan Chan and *Animal Keepers' Forum* at: akfeditor@zk.kscoxmail.com<

Mailing Address:

AAZK, Inc., 3601 SW 29th St., Suite 133, Topeka, KS 66614-2054

AAZK website Address: www.aazk.org

BFR Website: <http://aazkbfr.org>

Scoops & Scuttlebutt



From the Editor

This issue of *Animal Keepers' Forum* is dedicated to material relating to the many and varied aspects of conservation. This issue also premieres the first "Conservation Station" column which will be a quarterly addition to the *Forum* from the AAZK Conservation Committee. We welcome Conservation Committee Co-chairs Penny Jolly (Greater Orlando AAZK Chapter) and Amanda Kamradt (Greater Houston Chapter of AAZK). Many AAZK Chapters as well as individual AAZK members are involved in and support conservation projects in their own neighborhoods and around the world. As an association, AAZK's prime conservation fundraiser is Bowling for Rhinos which this year passed the \$3 million mark in monies raised to support rhino conservation in both Africa and Indonesia. We hope you enjoy this special issue dedicated to all things conservation and I would personally like to thank all those authors and photographers who contributed material to fill these pages. Enjoy! ~ Susan D. Chan, AKF Editor

New Animal Data Transfer Form is Here!

Do you remember the days when you were transferring an animal to a new facility and had to fill out three different ADT forms? You were probably wondering why some of the information on the forms was redundant, weren't you? Well, the redundancy is over! We all know how busy and stressful it can be when transferring animals between facilities. It can be very time consuming to fill out all of the paper work. In 2007, the Animal Training Committee of AAZK, Inc. combined all three forms into one easy-to-use form.

The Animal Data Transfer form is used when transferring animals from one institution to another. All of us have the same goal: to provide the best possible care for the animals for which we care. The information on the form provides the receiving institution staff with the right tools they would need to give that animal the best care possible. This form includes all the information someone would need about an animal from diet to behavioral history to training and enrichment history. The form can be found at www.aazk.org/animalkeeperform/datatransferforms.php.

AAZK encourages staff working with the animal prior to shipping to fill out the form. Your manager doesn't have to be the one to fill it out. Most of the time, the keepers know the animal's history the best. Any information you can give the receiving institution, no matter how small you may think it is, will be very helpful.

Happy Animal Transferring! If you have any questions about the form, please contact Tammy Root, AAZK National Board Member, at troot@indyzoos.com

Update on Chapter Challenge Winners

The 2008 AAZK Conference Committee has let us know that because one of the Chapter Challenge Winners - The Northern Lights Chapter - was unable to utilize the free registration and VIP book signing with Dr. Sapolsky, a drawing was held among the remaining Chapter Challenge participants, and the Point Defiance Chapter was awarded the free registration and VIP booksigning opportunity.

Bonobo Blog Established

AAZK member Delfi Messenger, author of *Grains of Golden Sand*, which recounted her experiences with bonobos in Africa and the conservation issues surrounding this species, has established a Bonobo Blog. She invites anyone interested in this species and its future both in captivity and in the wild to check it out. The URL is Delfisgrainsofgoldensandbonobos.blogspot.com

You're Invited to Join Carnivore Keepers' Listserves

The Carnivore Keepers' listserves are an adjunct to Facebook Group forums for carnivore husbandry professionals around the world. We invite anyone working with these taxa in zoological parks (public & private), sanctuaries, rehabilitation facilities, as well as academic laboratories to join. We also invite carnivore enthusiasts interested in husbandry and health programs for captive animals. In addition

Amphibian Specialist Group
<http://www.amphibians.org/>

Global Amphibian Assessment
<http://www.globalamphibians.org/>

World Assoc. of Zoos and Aquariums
<http://www.waza.org/conservation/campai>

North American Amphibian Monitoring Program
<http://www.pwrc.usgs.gov/naamp/>

Year of the Polar Bear

Polar Bears International
<http://www.polarbearsinternational.org/>

US Fish and Wildlife Alaska-Polar Bear Conservation
<http://alaska.fws.gov/fisheries/mmm/pol>

US Fish and Wildlife
<http://www.fws.gov/>

Polar Bear Specialist Group of the
IUCN Species Survival Commission
<http://pbsg.npolar.no/>



Photo courtesy Polar Bears International

Have You Sent AO Your E-mail Address Yet?

In order to better communicate with our members, and also save the Association the rising costs of mailings/postage, we are working to establish an AAZK member e-mail database. With such a database we would be able to send out electronic membership renewal notices, information about upcoming conferences, and other Association news. In order to make this work, we need your help.

Please send an e-mail to Barbara Manspeaker at aazkoffice@zk.kscoxmail.com with the words "AAZK Email Database" in the subject line. Please be assured that your e-mail address will not be shared with any other group or individual without your express permission. We are simply looking for ways to stay in touch with you as a member and to also help cut the costs of mailings and postage for the organization. It's all part of AAZK's continuing push to be more "green" in our administration. Thanks in advance for helping us achieve this cost-cutting goal.

New Bowling for Rhinos Yahoo® Group Formed !

There is a new yahoo groups email for Bowling For Rhino Coordinators. If you would like to be part of this email group, please email Barbie Wilson at rhinobarbie@hotmail.com. This lets us communicate with other BFR coordinators with questions about t-shirts, bowling alley prices, how to get more support from your zoo, etc.

to the links available on the group pages, there are also resources available on www.bearkeepers.net which cater to husbandry and training professionals, conservation managers, conservation educators, wildlife health practitioners and field researchers.

Although we address primarily husbandry, training, enrichment (behavioral & environmental), propagation, exhibit design, clinical medicine, preventive medicine, nutrition, hand rearing and *ex situ* conservation research initiatives, we invite field researchers, naturalists, conservation educators and wildlife managers to join these groups. *Thanks, Jordan Schaul, Ph.D.*

www.yahoo.com <<http://www.yahoo.com/>>

www.facebook.com <<http://www.facebook.com/>>

Wildcanidkeepers:

Group home page: <http://groups.yahoo.com/group/wildcanidkeepers>

Group email address: wildcanidkeepers@yahoogroups.com

Facebook: Canid & Hyaenid Keepers

Bearkeepers:

Group home page: <http://groups.yahoo.com/group/bearkeepers>

Group email address: bearkeepers@yahoogroups.com

Facebook: Bear Keepers

Mustelidkeepers:

Group home page: <http://groups.yahoo.com/group/mustelidkeepers>

Group email address: mustelidkeepers@yahoogroups.com

Facebook: Mustelid Keepers

Sealkeepers:

Group home page: <http://groups.yahoo.com/group/sealkeepers>

Group email address: sealkeepers@yahoogroups.com

Facebook: Seal Keepers & Trainers

Felidkeepers:

Group home page: <http://groups.yahoo.com/group/felidkeepers>

Group email address: felidkeepers@yahoogroups.com

Facebook: Felid Keepers

Viveridkeepers:

Group home page: <http://groups.yahoo.com/group/viveridkeepers>

Group email address: viveridkeepers@yahoogroups.com

Facebook: Viverid Keepers

Websites of Interest from the AAZK Conservation Committee

The following websites deal with information on Year of the Frog and Year of the Polar Bear. Check them out!

2008 Year of the Frog www.amphibianark.org/yearofthefrog.htm

AZA

<http://www.aza.org/yearofthefrog/>

El Valle Amphibian Rescue Center

<http://www.houstonzoo.org/en/cms/?2149>

Amphibian Conservation Program

http://www.aza.org/ConScience/Amphibians_Intro/

Amphibian Research Centre

<http://frogs.org.au/>



From the President . . .

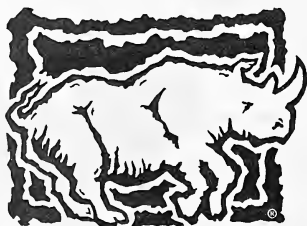
I Am Sasquatch, Behold My Carbon Footprint

Epiphanies are best experienced in youth, allowing time for inspiration to evolve into a force of habit. There were countless childhood revelations that steered me towards conservation, but my personal conservation ethic was nurtured in the groves of Academe. I majored in Fish and Wildlife Management at a small college nestled in the Appalachian foothills of Wayne National Forest. Our classroom was the forest, lakes, and rivers of southern Ohio. To this child of the city, college life was reminiscent of *Walden*. Being veritable and true to Thoreau, my academic career was equal parts *Animal House* as it was *Animal Planet*, a balance of *Van Wilder* and *Wild America*, but a conservation ethic was carved nonetheless.

Attributable to my conversion was the strange amalgam of classmates who filled the ranks of the school's Natural Resources Department. A curious combination of country plow boys, hippies, and camo-clad members of the hook and bullet crowd all aspiring to become fisheries technicians, wildlife managers, game wardens, and park rangers. Classroom essentials for some included waterproof hunting boots, a six-inch Buck knife, and empty *Mountain Dew* can for tobacco spittle, while others opted for the equally important tie-dye t-shirt, hemp backpack with Deadhead patch, and the always appropriate Dylan quote, preferably from *Subterranean Homesick Blues*. At all times, some sort of clothing from the local feed and seed store was required. In the midst of this cast of characters were Larry, and his girlfriend Earthchild.

Larry and Earthchild lived in a tent within the oak-hickory forest that blanketed the hills behind the college. (Yes, every word of this story is true). Totally off the grid, except for their college registration, they exemplified sustainability from within their woodland basecamp. They would descend from the timbers each morning to attend class, clad in clothing fashioned from deer hides, long suede boots, and feather and beaded tassel accessories. Occasionally I would see Larry at the rec center where he used the shower facilities, presumably on a weekly basis. But the focus of my attention was Earthchild. I have always had a fondness for hippie chicks. From across the classroom, patchouli and pheromones beckoned me to daydreams of hippie bliss, where bluebirds perched on our tent, incense wafted in the air, and Brother Bob crooned on the radio while we lived in perfect harmony with nature.

Fast forward to 2008. It is Year of the Polar Bear, Year of the Frog, and the Year I Get to Feel Like a Heel. The year started out well enough. Suddenly everyone was channeling their inner Earthchild and going green. Politicians, celebrities, and even *Wal-Mart* had joined the movement. Personally I had just begun my AAZK presidency, and exciting conservation projects were happening at all levels of the Association. Several Chapters were participating in Year of the Polar Bear as part of a pilot project with Polar Bears International. Bowling for Rhinos surpassed Three Million Dollars in funds raised. Chapters donated One Million Dollars to conservation causes in the previous year. Chapters and individual members across the country were rolling up their sleeves and conducting their own conservation projects. A national AAZK Conservation Committee was formed.



**AMERICAN
ASSOCIATION
of ZOO KEEPERS**

Then along came Al Gore. I took his challenge and calculated my carbon footprint. Let's just say I landed somewhere between Oil Tanker Ship Captain and Spotted Owl-cursing Lumberjack. Okay, maybe it wasn't that bad, but Inconvenient Al sure had me feeling that way as he shattered my green illusion.

Apparently that 30-minute commute to work isn't a good thing. Al wasn't too fond of the gas mileage from my 15-year old pickup truck either. My affinity for travel wasn't helping, but maybe I'd get some bonus points for being a zookeeper. As it turns out,

working in a zoo isn't that great either. Sure we do lots of conservation work, improve the future for endangered wildlife, and educate millions of zoo visitors. But zoos consume vast amounts of resources in the process of feeding our animals, filling our pools with fresh water, and heating and cooling our buildings for the comfort of zoo animals and zoo visitors. (Notice I did not mention the comfort of zookeepers, who still toil in their work areas like second-class citizens!). I can't even look at the koalas anymore, those sleepy-eyed, carbon munching tree dwellers that recline in their air conditioned holding area and have their fresh eucalyptus shipped in by plane every few days. Thanks again, Al.

Things don't get any better at home either. My 60-year-old farmhouse was insulated in the vintage style of Swiss cheese. The old windows in my house are so drafty, even our Labrador retriever wears a wool hat to bed on winter evenings. A HVAC tech recently revealed to me that my old furnace is almost as efficient as burning a candle in front of a box fan. Those record setting propane and natural gas predictions for this winter have me asking "Who really needs luxuries like food anyway?"

There are solutions. My rich neighbor Dave recently converted his home to geothermal energy for \$20,000. One celebrity converted his house to solar power for \$27,000. That hybrid vehicle I have been eyeballing comes at the low cost of \$25,000. Several thousand here and several thousand there, I can fix all those problems in my house. The problem is, I'm a zookeeper, and finding extra spending cash is about as easy as spotting a purple unicorn in my backyard.

There is good news. Going green, as I'm sure you already know, doesn't need to cost a lot of money. To assist in the process, we have a brand new Conservation Committee to help. Charged with multiple tasks, the committee will provide members with ideas for going green (on a keeper's budget), will serve as a green watchdog for the Association by monitoring conferences and work practices for sustainability, and assist members and Chapters in organizing and evaluating their own conservation projects.

My personal goal for this year was to adopt 10 new ideas for going green at home. I wish I could consult Larry and Earthchild, but nobody knows for sure what happened to them. They never returned to the college after Christmas Break. Some say they left school so Larry could become a roadie for the *Allman Brothers*, while Earthchild started her own hemp clothing line. A popular rumor had Larry and Earthchild starting their own organic vineyard in the valley, while others say they perished in the ice storm of '88. Legend has it that Larry's wild yowl and Earthchild's mournful cry can be heard during a full moon at Wildcat Hollow. I prefer to think they're doing just fine, and raising a toast of pesticide-free pinot in salute to the conservation efforts made by this Association and yours truly. But there is still work to be done. As Earthchild might paraphrase, "You don't need a weatherman to know which way the wind blows, but a Conservation Committee can sure help point you in a green direction". As zookeepers, we are obligated not only to educate zoo visitors about environmental issues, but "walk the walk" ourselves. Whether you are a struggling Sasquatch like myself, or tread the Earth lightly in Hobbit-sized *Birkenstocks*®, here's hoping that our Conservation Committee can nurture your path.

Can you help Sasquatch? Please send your top ideas for going green to shane.good@aazk.org. I'll print the top ten simple, low-cost, easy-to-achieve ideas for green living in an upcoming Letter from the President. Maybe I'll even buy you a locally brewed beer with organic hops at the upcoming conference in Salt Lake City. Hope to see you there!



Shane Good
President, AAZK, Inc.
Cleveland Metroparks Zoo

Coming Events

Post Your Coming Events Here
email to: akfeditor@zk.kscoxmail.com

Association of Zoo Veterinary Technicians 28th Annual Conference - October 2-6, 2008 at Buttonwood Park Zoo in New Bedford, MA. For more information visit www.azvt.org

2008 Elephant Managers Association Conference - October 3-7, 2008 in Orlando, FL. This meeting will focus on the challenges, experiences and achievements of successful captive management programs. The program organizers, Hosts are seeking presentations addressing programs for training qualified elephant personnel, the link between captive management programs and range country populations, as well as research and conservation. See <http://www.elephant-managers.com/> for further information.

The 2nd SSP Orangutan Husbandry Workshop - October 12-14, 2008 at the Saint Louis Zoo, St. Louis, MO. This workshop will focus on the care and management of the orangutan in zoological parks and sanctuaries. The workshop will bring together orangutan caregivers and managers, researchers, and field biologists to share and disseminate the most current information on husbandry, conservation, and emergent issues pertaining to captive and wild populations of orangutans. Please contact Terri Hunnicutt at pongopan@yahoo.com or hunnicuttl@stlzoo.org for further information

2008 Zoological Registrars Association Annual Conference - October 22-25, 2008. Hosted by The Saint Louis Zoo. The Sheraton Westport Chalet has been selected as the conference hotel and they have offered us the government rate of \$106 per night. The hotel provides free airport shuttle and parking. If you have any questions, please do not hesitate to contact Rae Lynn Haliday at haliday@stlzoo.org or at (314) 781-0900 x 372.

First European Elephant Management School - November 10-18, 2008 at Tierpark Hagenbeck Hamburg, Germany. For further info please go to <http://www.elephant-management.com> For additional information and registration, please contact: hering@hagenbeck.de

Elephant Conservation & Research Symposium - November 11-13, 2008 at the Nong-Nooch Tropical Garden & Resort in Pattaya. For further information contact Dr. Harald M. Schwammer at h.schwammer@zoovienna.at or see their website at <http://www.ekephantconservation.org/2008symposium.php>

The 5th Crissy Zoological Nutrition Symposium - December 12-13, 2008 at the North Carolina State University School of Veterinary Medicine. This year's focus will be "Obesity in Zoological Species". For registration and a skeleton schedule please view www.cvm.ncsu.edu/conted/zoonutrition/

International Symposium on Bat Migration - January 16-18, 2009 in Berlin, Germany. For further info: batmigration09@izw-berlin.de or check the web page at <http://www.izwberlin.de>

Zoos and Aquariums Committing to Conservation - January 23-26, 2009. Hosted by the Houston Zoo, Houston, TX. ZACC is a bi-annual event that promotes the role of zoos and aquariums in supporting conservation activities worldwide, both at their institutions and in the field. Bringing together individuals from different countries and disciplines, ZACC conferences help to build a stronger and more effective global network for wildlife and habitat conservation, and to establish direct links to zoos, aquariums, and their constituencies. For info contact: <http://www.houstonzoo.org/zacc> or conservation@houstonzoo.org

International Association of Avian Trainers and Educators 17th Annual Conference - February 24-28, 2009 hosted by the Cincinnati Zoo & Botanical Gardens. "09 in Nati" will feature papers, posters, site visits, roundtables, vendors and workshops. Topics include avian behavior, training, husbandry, conservation, strides in veterinary care, as well as show presentation, production and educational content. For further info please visit www.iaate.org or contact Eddie Annal at ed.annal@cincinnati-zoo.org

Call for Papers & Posters: Share your knowledge, expertise and experience with IAATE members. We are soliciting papers on: Training and Behavior; Shows and Education, conservation and Research; and Animal Management and Veterinary Medicine. Each paper will be allotted 30 minutes (20 presentation/10 minutes Q&A). Posters will be on display throughout the conference with time allotted to meet the authors. Electronic submission in MS Word preferred. Submit abstracts by **1 October 2008** to: Cassie Malina, 414 Broadway Ave., Orlando, FL 32803; email: CMa924@aol.com; phone: 407-497-6411.

Prosimian Husbandry Workshop - April 30- May 2, 2009. Hosted by the Cleveland Metroparks Zoo. The workshop will emphasize group discussion of captive prosimian husbandry and management issues. Look for registration, lodging, and workshop information at the workshop web-page, www.clemet zoo.com/prosimianworkshop starting August 2008.

The 9th International Conference on Environmental Enrichment - May 31 - June 5, 2009 in Torquay, Devon, UK. First Call for papers and Registration. Go to www.reec.info for details.

Neotropical Primate Husbandry, Research, and Conservation Conference - October 13-15, 2009 in Chicago, IL. Hosted by the Brookfield Zoo. This conference will focus on a variety of topics pertaining to neotropical primates and will bring together staff from zoological parks, sanctuaries, and universities, as well as field researchers and range country biologists to share the most current information on husbandry, conservation, and emergent issues pertaining to captive and wild populations of neotropical primates. The workshop will include three days of presentations, a poster session, as an icebreaker, silent auction, and banquet. Additional information will be made available in late 2008. Please contact vince.sodaro@czs.org for additional information.

How do you formulate life-saving milk replacers to meet each species' special nutritional needs?

The answer—Milk Matrix from Zoologic® Nutritional Components.

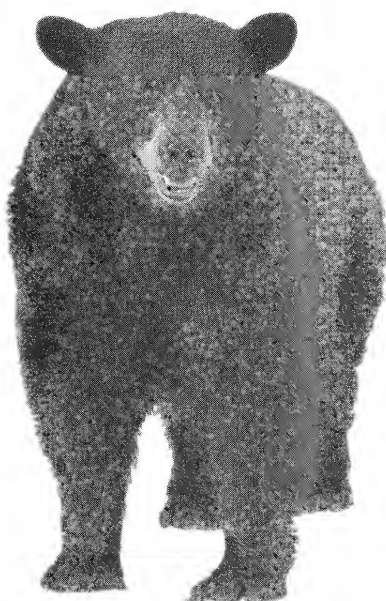
Milk Matrix is a line of 7 milk replacers that can be used alone or blended to closely simulate the protein, fat, and carbohydrate content of the milk you're substituting.

With the Zoologic Milk Matrix System you get complete easy-to-read milk matrix formulations, nutritional analyses, species specific data sheets and exact mixing instructions.

Everything you need for optimal health.

Find out more about the Milk Matrix system. Call 1-800-323-0877 and make saving lives a little easier to handle.

Because saving lives can be a bear.



zoologic[®]
nutritional components



Questions? Call 1-800-323-0877 for answers.



A product of PetAg, Inc.

CONSERVATION STATION

Introducing the AAZK Conservation Committee...

Greetings Everyone!

What's Your Conservation Passion? The Conservation Committee would like to help you explore your interests, whether they are working in wildlife conservation projects or practicing resource preservation and renewal everyday!

The AAZK Conservation Committee was established in October 2007 with the purpose of fostering and celebrating the relationship between environmental conservation and the zookeeping profession. Our dynamic committee consists of seven members from across the country — Mindi Avery, Holly Border, Vonceil Harmon, Amanda Ista, Julie Izold, Lindsay Pick, and T'Noya Thompson — and thrives with the support of contributing member Beth Stark-Posta, and the leadership of national Board member Bob Cisneros. The driving force behind our committee's work is our mission statement...

Our Mission Statement is:

- *To promote and establish connections between AAZK members and the conservation of wildlife and their habitats.*
- *To provide educational resources for members and their institutions about environmentally responsible practices.*

Our Vision Statement is:

- *Serve as a resource that will assist members in finding in situ opportunities with local, national, and international conservation projects and to initiate new conservation projects.*
- *Provide contact information to coordinate educational and developmental opportunities with conservationists.*

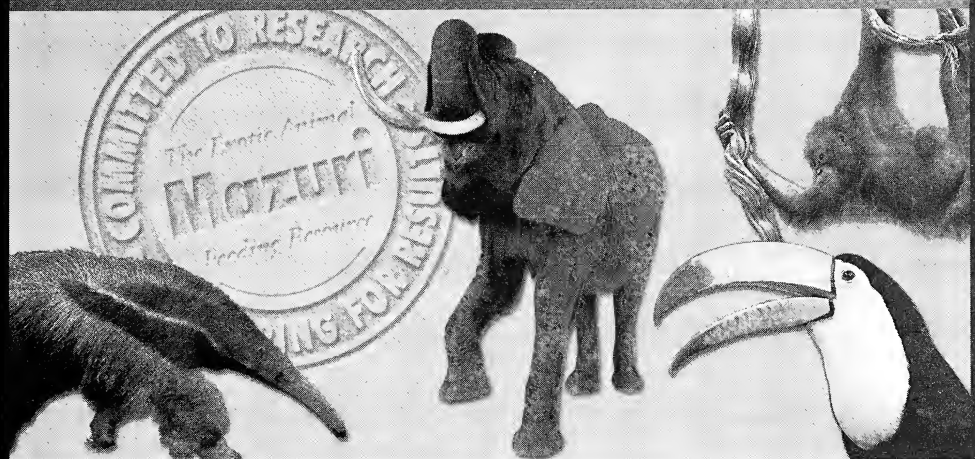
You are reading the first edition of *Conservation Station*, our quarterly column that is one of many projects this committee is currently undertaking. A few of our other projects include, but are not limited to, assisting AAZK members with becoming involved in in-situ conservation work, and assisting with making our future conferences as green as possible. Most of all, we want to hear what you, the AAZK membership, would like from the Conservation Committee. Please e-mail us at jollyhome@verizon.net and/or amanda_kamradt@yahoo.com with any ideas, questions, or suggestions you may have for us.

We are a resource for you as AAZK members. We will bring you ideas and practices to engage in. Our commitment together as Professional Zoo Keepers and individuals will enable all of us to make a difference everyday!

Thank You from Your Conservation Committee Co-Chairs,

Penny Jolly, Greater Orlando AAZK Chapter

Amanda Kamradt, Greater Houston Chapter of AAZK



DIETS AS DIVERSE AS THE ANIMAL KINGDOM

Working in partnership with zoos and aquariums, MAZURI® PhD nutritionists develop industry leading products specifically for each species. From aardvarks to zebras, we work hard to give your animals the most of what they need.

For more information on MAZURI® products—including nutritional analyses and research findings—visit www.mazuri.com

or call 1-800-227-8941 for the location of your nearest dealer. Because when it comes to great nutrition, we're committed to the health and longevity of every animal.

Mazuri®
The Exotic Animal Feeding Resource

www.mazuri.com

AAZK Announces New Members

New Professional Members

David Kessler, **Smithsonian's National Zoological Park (DC)**; Kimberly Mann, **National Aquarium in Baltimore (MD)**; Maria Hernandez, **Disney's Animal Kingdom (FL)**; Katheryn Watkins, **Cincinnati Zoo (OH)**; Kathryn Nixon, **Binder Park Zoo (MI)**; Geoff Sowan, **(KS)**; Heather Ladd, **Hutchinson Zoo (KS)**; Jennifer Best, **Chimp Haven (LA)**; Melanie DeLoach-Lesh, **San Diego Zoo (CA)**; Sharon Boyles and Alexis Day, **California Living Museum (CA)**; Mary Ann Meyers, **San Francisco Zoo (CA)**; Marlee Breese, **Marine Mammal Research Center/University of Hawaii (HI)**; David Rodrique, **ECOMUSEUM (Quebec)**; and Dianne Morrison, **Toronto Zoo (Ontario)**. Beginning with the March 2008 issue of *AKF*, we no longer list the names of those Professional Members who do not list their facility on their membership application.

Renewing Contributing Members

Kevin Koch
Cathedral City, CA

Amy Roberts
Oak Park, IL

New Institutional Members

Wildlife Associates
Half Moon Bay, CA
Steven Karlin, Executive Director

Renewing Institutional Members

Seneca Park Zoo, Rochester, NY
Lawrence Sorel, Director

Peace River Refuge & Ranch
Zolfo Springs, FL
Kurt Stoner, President

Alabama Gulf Coast Zoo
Gulf Shores, AL
Patti Hall, Director

Frank Buck Zoo
Gainesville, TX
Susan Kleven, Director

Heritage Park Zoological Sanctuary
Prescott, AZ
Pam McLaren, Executive Director



Woodland Park Zoo
Seattle, WA
Deborah Jensen, President & CEO

Towards a Hopeful Future....



Photo: Eddie Mulholland

Three baby gorillas born in Kent have arrived safely in Africa to begin new lives in the wild. Kouki, Oudiki and Tiya left Howletts Wild Animal Park, near Canterbury, and flew from Farnborough Airport courtesy of Sir Richard Branson to the Gabon in late July. Amos Courage, overseas director of the Aspinall Foundation, which runs Howletts and Port Lympne Zoo said the western lowland gorillas had adapted quickly to their new surroundings. Damian Aspinall (shown above), the millionaire son of John Aspinall, who set up the conservation charity, said: "They will be taken for walks every day in the forest and in a few years they will be ready for life in the jungle. The three were rejected by inexperienced mothers and hand-reared at Howlett's. Source: *Telegraph.co.uk*

**THE
GOURMET
RODENT,
INC.™**


RATS AND MICE

Bill & Marcia Brant

12921 SW 1st Rd., Ste 107,
PBM #434
Jonesville, FL 32669

(352) 472-9189

Fax: (352) 472-9192

e-mail: GrmtRodent@aol.com

BFR Winners See Rhino Conservation Close-up at Indonesian National Parks

By
Rana Bayrakci, Keeper
Woodland Park Zoo, Seattle, WA

After several years raising money for Bowling for Rhinos (BFR) through Woodland Park Zoo's Puget Sound AAZK Chapter, I was stunned to learn that I had placed third in the nation and was going to Indonesia for two weeks in April and May of 2008. Along with Heather Strawn, a keeper from the Cleveland Metroparks Zoo, I would see firsthand how BFR funds support *in situ* rhino conservation. I couldn't have been more excited – or more unprepared for what this trip really meant.

The International Rhino Foundation (IRF), the NGO that distributes BFR monies directly into the Indonesian-based rhino conservation programs organized our trip. IRF Director Dr. Susie Ellis was our charismatic trip leader. IRF's Indonesia Liaison, the talented Sectionov ("Inov"), expertly orchestrated all trip details. We were joined by several trustees of Asian rhino conservation groups as well as the head of the Asian Rhino Project, Kerry Crosbie, Auckland Zoo Keeper Nat Sullivan, IRF's veterinarian Dr. Robin Radcliffe, and IRF's new Asian Rhino Coordinator Dr. Bibhab Talukdar. YABI (Rhino Foundation of Indonesia) Protection Program Manager Waladi Isnain also traveled with us; his extensive knowledge of the flora and fauna was an invaluable addition to the trip.

We visited two national parks in Sumatra, Bukit Barisan Selatan (BBS) and Way Kambas, and one national park in Java, Ujung Kulon. We hiked in the hot, humid jungles of all the parks and traveled by boat along rivers in two of them.

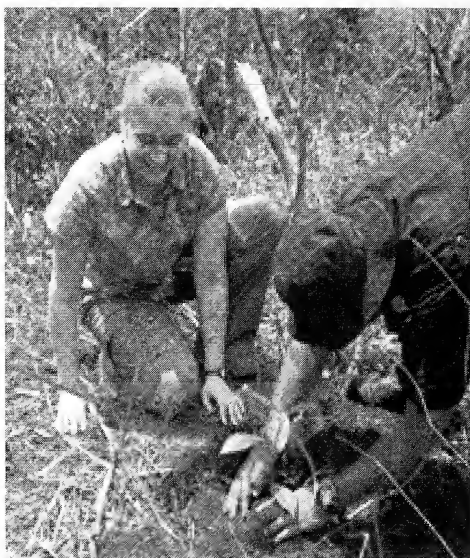
The highlight of the trip was getting to know the "RPUs" or Rhino Protection Units. These uniformed men are the front lines of rhino conservation, believing so strongly in the preservation of the rhino that they put their lives on the line to provide Sumatran rhinos (*Rhinoceros sumatrensis*) the protection necessary to eradicate poaching. The RPUs are organized in groups of four; eight units patrol BBS, five groups protect Way Kambas, and three units guard rhinos in Ujung Kulon. The RPUs spend 15-20 days per month on patrol in the forest, constantly searching for signs of rhino, which they measure and record, and evidence of poaching and encroachment (illegal farming on park land). Through their constant vigilance, undercover intelligence work as well as education of and outreach to park neighbors, they have all but eliminated poaching and garnered well-deserved respect and support from locals. With the exception of one poaching incident in Way Kambas in 2006, no rhinos have been poached from any of these parks since 2003.



**Heather & Rana in leech
socks while at Ujung Kuon**

While in Way Kambas (1300 square km), we took a boat trip down the Way Kanan River and spent the night at an RPU camp on a narrow spit of sand between the river and the ocean. In Way Kambas, we saw signs of rhinos, tapirs, and elephant. We saw the claw marks of a sun bear climbing up into the forest canopy and the long scrapes from the slide down to the forest floor. We also attended a poignant memorial service for Dr. Nico Van Strien, a Dutchman who was very involved with rhino conservation since 1973 and the IRF Asian Rhino Program Coordinator.

Within Way Kambas, we spent time at the Sumatran Rhino Sanctuary (SRS), a 250-acre research and education facility developed in 1996 and currently housing five rhinos. The goal is to breed and reintroduce Sumatran rhinos into the wild. Staff collects data and conducts extensive research focused on behavior, breeding, and medical care while the rhinos enjoy large, fenced patches of natural forest and concrete stalls for daily baths, hand feeding, and any medical procedures. We even met the famous Sumatran rhino Andalas, the male born at the Cincinnati Zoo in September 2001, who will hopefully successfully breed so his offspring may be reintroduced into Way Kambas.



Rana planting tree with RPU at BBS

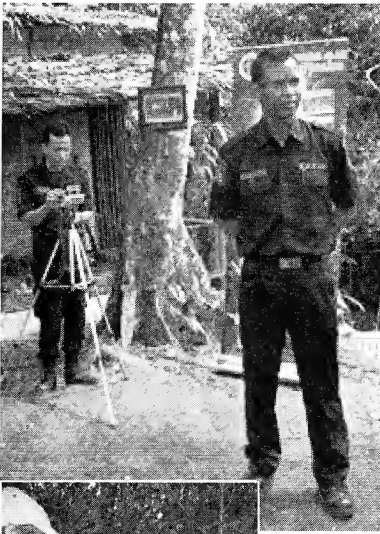
We reached our final park destination back on the island of Java by sailboat: Ujung Kulon, the last stronghold of the Javan rhino (*Rhinoceros sondaicus*). This small park (1200 square km) includes a marine sanctuary and perhaps only about 74,000 acres of possible rhino habitat. The current population estimate is 40-60 Javan rhinos, though more precise numbers will hopefully be obtained by camera trap surveys within the next year.

In Ujung Kulon, we hiked on Handeuleum Island, canoed down the Cigenter River, hiked across the narrow park isthmus to the Indian Ocean, walked to the Cidaon Grazing Ground (in the hopes of seeing banteng), and hiked around Peucang Island. We saw more than 50 rhino footprints, including prints from the night before as well as older prints, week-old rhino dung, banteng footprints and feces, a leopard footprint, flying hornbills and flying foxes, long-tailed macaques, peacocks, Timor deer, sea eagles, water monitors, a large subspecies of Prevost's squirrel, and many species of birds and insects. Following an RPU methodically clearing a trail by machete, I was amazed to see the tree notches "bleed" with a variety of sap colors, from stark white to blood red. Everything was fascinating, from the colorful butterflies to the deafening chorus of cicadas. The heat and humidity were overwhelming, and I couldn't fathom wearing the full-length black attire of the RPUs in the jungle, much less carrying a full pack through the forest for weeks at a time as they do. Even so, they made us honorary RPUs with the gifts of RPU uniform hats and T-shirts.



RPUs measure rhino footprint in Ujung Kulon National Park

Our visit was actually a morale boost for the RPUs. We were the fourth group of BFR bowlers to travel to Indonesia. They called us "The Bowlers" and documented our every step, stumble, and leech experience with both still and video photography. They entertained us with footage of last year's bowling trip experiences set to music (including Abba), and we worried about the movie we'd be starring in for next year's bowling trip! It is difficult for the average Indonesian to travel outside the country, so to have people from foreign countries make the long trip to their national parks to see their work is a pretty incredible demonstration of support for their daily efforts. The annual BFR trip is really more important for rhino conservation staff morale than for the individual BFR winners.



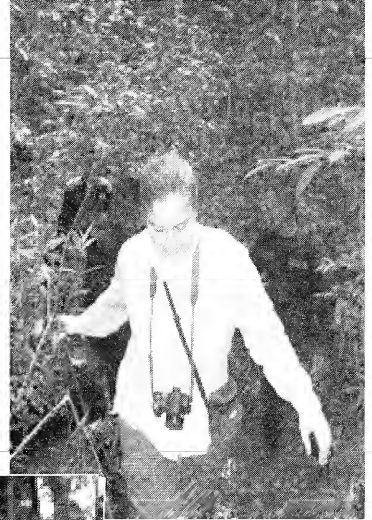
Author on boat in Way Kambas

**Top left: Zen films
Arief RPU at
Rhino Camp BBS**



**At left: Susie Ellis and Supriyong
with rhino grazed branch in
Way Kambas**

**At right: Author crossing
rhino wallow with RPUs**



Group photo with RPUs Rhino Camp BBS

I was humbled to meet these men of action: people who are living the lives of dedicated conservationists in a way I can barely imagine. Whether we are caring for animals in captivity or studying them in the wild, our personal level of commitment often remains at a distance – our contributions tend toward the financial and educational. The RPUs are putting their lives on the line every day that they patrol the forests in the interest of rhino preservation. Our contributions and support are critically important for their work to continue with the success it has, and our gratitude is shown by the dollars we raise every year at our Bowling for Rhinos events. Long live BFR! Together, we are truly making a difference.

Photos provided by the author and Susie Ellis

From Education to Motivation - How are YOU celebrating Year of the Polar Bear 2008?!

*By Alicia Shelley, North America Region Keeper
Columbus Zoo and Aquarium, Powell, OH*

So many things are going on this year for Year of the Polar Bear (YOPB), it is hard to list them all! Your local AAZK Chapters have been busy within their communities doing many exciting things. It ranges from choosing a local student for leadership camp in Churchill to letting kids put their head in the jaws of a polar bear skull (replica, of course)! How many people can say they have done that? The possibilities are endless!

The Point Defiance Chapter raised money for a local student to attend leadership camp and has some great polar bear messaging in many of their educational programs. They have some awesome ideas for influencing every age from pre-school to adults!

The Milwaukee Chapter has teamed up with the Wisconsin Department of Natural Resources to reach a tree planting goal of 20 million trees planted by the year 2020! Wouldn't it be great if we could all do this in our communities?

The Oregon Zoo had some great ideas such as green party planning, bike for bears, a polar bear birthday celebration and more!

St. Louis has been busy with a presentation by Steve Kazlowski, author of "The Last Polar Bear: Facing the Truth of a Warming World". Main points of climate change and how to help is discussed every day in keeper talks. A Polar Plunge - a lecture on climate change for adults and a polar bear trunk filled with fun and interactive information were other activities.

There are also some great fundraising ideas out there! "Climate Change" is a concept that uses coin collectors within the zoo for funds for polar bear projects. A reverse raffle and even a video game tournament for polar bears are also in the works.



PBI President Robert Buchanan demonstrates the size of a polar bear's bite to a young zoo visitor.

(Photo above and below left by Alicia Shelley)



Robert & wife Carolyn share artifacts with a young zoo visitor.

Many Chapters are using climate change to tie together Year of the Frog and YOPB. Zoos are promoting the "Turn Down the Heat for Polar Bears" campaign as well as highlighting polar bears during bear awareness week, web chats with researchers, and lectures from polar bear biologists. Programs such as Adopt a Den and Adopt a Tree have also been discussed. One zoo is choosing icon animals around the zoo and highlighting the challenges they would face in the wild due to climate change.

I think we can all agree that the messages that visitors take home and share is most often from a hands-on experience. That's how the great bio-facts from PBI including a skull and nail replica, radio collar, polar bear fur and ear tag make for a fun and memorable day at the zoo!



Picture above: PBI President Robert Buchanan; Snowball, Cleveland Metropark Zoo's Senior Polar Bear; Shane Good, AAZK President; Maribeth Flowers, Cleveland Chapter of AAZK's student representative for the PBI Leadership Camp, and Carolyn Buchanan, Polar Bears International.

(Photo by Alicia Shelley)

Columbus is developing a "Plant a Tree for Me" program to encourage everyone everywhere to plant a tree (or 2 or 10)! They also have a keeper who participates in the In Field Lecture Program in Churchill, Canada through Polar Bears International(PBI). This program gives an invaluable opportunity to talk to visitors on the Tundra Buggies® and let them know how zoos are working with researchers in the field to help polar bears and all of the animals in the Arctic. They, along with many other AAZK Chapters had the opportunity to have Robert Buchanan, PBI President, give both staff and visitor lectures. For anyone who has been lucky enough to hear Robert speak, you understand when I say that his passion and commitment to the Arctic is inspiring and contagious! His motivating words, beautiful Powerpoint® photos and PBI mini posters we can share with the public give us all of the ammunition we need to infect everyone with the polar bear bug!!

Thanks so much to all of the AAZK Chapters participating in Year of the Polar Bear activities!

Thanks also to everyone out there that is making a difference even when you don't realize that you are! Remember, EVERY day of EVERY year, not just 2008, needs to be dedicated to inspiring others to care about what's happening to our earth. We are all celebrities to the visitors that come to the zoo, and with that we can inspire great things in all ages! YOU have the power to make a difference, so start today!



Visit

www.polarbearsinternational.org
for more information

At left: Cleveland Metroparks Zoo volunteers share polar bear artifacts with curious young visitors. (Photo by Kevin N. Rhodus, Columbus Zoo & Aquarium)

AAZK Chapters Participating in Year of the Polar Bear Activities

CONTACT INFORMATION

AAZK, Inc.

Shane Good
Cleveland Metroparks Zoo
3900 Wildlife Way
Cleveland, OH 44109
Phone: (216) 661-6500 ext 4455
Fax: (216) 661-3312
shane.good@aazk.org

Cleveland Metroparks Zoo

Tiffany Mayo
Cleveland Metroparks Zoo
3900 Wildlife Way
Cleveland, OH 44109
Phone: (216) 661-6500 ext 4449
Fax: (216) 661-3312
tiffanyvarga@hotmail.com

San Diego Zoo

Robert Cisneros, Lead Keeper
Children's Zoo
San Diego Zoo
P.O. Box 120551
San Diego, CA 92112
(619) 231-1515 ext 4023
Fax: (619) 744-3337
rcisneros@sandiegozoo.org

Oregon Zoo

Julie Christie
Oregon Zoo
Attn: Julie Christie, Marine Life Dept
4001 SW Canyon Rd
Portland, Oregon 97221
Phone Number: (503) 226-1561 ext 5336
Julie.Christie@oregonzoo.org

Toronto Zoo

Heather Kalka
361A Old Finch Ave.
Scarborough, Ontario, Canada
M1B 5K7
(416) 392-5953



Milwaukee Zoo

Dawn Fleuchaus
Milwaukee County Zoo
10001 W. Bluemound Rd
Milwaukee, WI 53226
(414) 771-3040 work
dawn.fleuchaus@milwcnty.com work

Columbus Zoo

Alicia Shelley
Columbus Zoo & Aquarium
PO Box 400
Powell, OH 43065-0400
(614) 645-3400 work
Alicia.Shelley@columbuszoo.org

St. Louis Zoo

Erin Connett
St. Louis Zoo
Carnivore Unit
#1 Government Drive
St. Louis, MO 63109
(314) 781-0900 ext 273
econnett8@charter.net

Pt. Defiance Zoo

Craig Standridge
Public Programs Manager
Red Wolf SSP Education Advisor
Point Defiance Zoo & Aquarium
5400 North Pearl Street
Tacoma, WA 98407
(253) 404-3690
cstandridge@pdza.org



Transform your
workplace, your life,
and the lives of the
animals in your care.

Embassy 180 programs are scientifically based and offered in two unique and beautiful Florida locations: *Dolphin Cove* in Key Largo and *Central Florida Zoo and Botanical Gardens* in Sanford. Our instructors represent more than 100 years of experience pioneering behavioral programs and authoring publications.

Velocity Animal Training Workshops. Achieve maximum effectiveness through an advanced hands-on, 5-day intensive workshop. Limited to 30 zoo and aquarium animal care/behavior professionals per workshop. Program is unique in content, set in a spectacular location and provides access to animals for experiential learning.

Oct. 6-10, 2008 at Dolphin Cove, Key Largo, FL

Dec. 1-5, 2008 at Central Florida Zoo & Botanical Gardens

Economy Savings!

If the economy has tightened your travel budget at home or at work, check out our special rates for early and multiple reservations within your institution. Visit our web site for details.

CORE INSTRUCTOR TEAM

Thad Lacinak

Ted Turner

Angi Millwood

Alyssa Simmons

Todd Feucht



www.embassy180.com • 1.877.E180-NOW

**A HUGE THANK YOU TO THE
GOLD SPONSORS OF THE 2008
AAZK NATIONAL CONFERENCE!!!**

September 24th-28th
www.utahaazk.org



www.hoglezoo.org
801-582-1631

Utah's 
**HOGLE
ZOO**



**FRONTIERS
NORTH**

A D V E N T U R E S

www.frontiersnorth.com
1-800-663-9832

www.bomerball.com
847-546-6125



2008 AAZK Conference Gold Sponsors

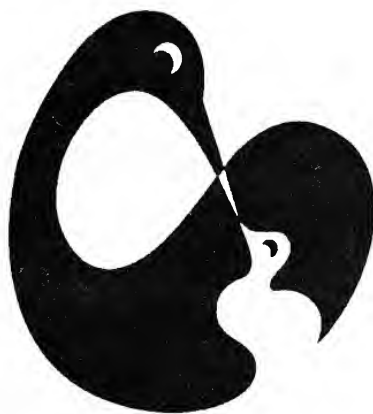


www.polarbearsinternational.org

A World
of Birds
in Utah

Tracy Aviary

www.tracyaviary.org
801-596-8500



THRIVA

activeNETWORK

ONLINE REGISTRATION AND MANAGEMENT SOFTWARE

www.thriva.com

Amy Sutherland—Featured speaker and author of:

"Kicked, Bitten and Scratched- Life and Lessons at the World's Premier School for Exotic Animal Trainers" and "What Shamu Taught Me About Love, Life and Marriage—Lessons for People from Animals and Their Trainer."

www.amysutherland.com

WHAT
SHAMU
TAUGHT ME
ABOUT LIFE
LOVE
AND
MARRIAGE



Lessons for People from Animals and Their Trainers

AMY SUTHERLAND

Snow Leopard Enterprise: *A conservation project that saves an endangered species and supports needy families.*

By J. Izold, Animal Keeper
Cleveland Metroparks Zoo
Cleveland, OH, USA

*A note to the readers of AAZK Forum – I wrote this article in 2006 for a conference presentation and wanted to include it in our Forum dedicated to conservation. I apologize for not having the most recent information on the Snow Leopard Enterprise program. This paper was originally presented at the 2nd International Congress on Zookeeping in 2006.

Abstract

The World Conservation Union listed the snow leopard (*Uncia uncia*) as endangered in 1974. With as few as 3,500 snow leopards left in the wild, scientists placed the snow leopard on the IUCN Red List of critically endangered species shared by animals such as the giant panda and tiger. In an effort to save the snow leopard from extinction, former zoo employee Helen Freeman founded the Snow Leopard Trust in 1981. The Snow Leopard Trust works to save this elusive cat by incorporating community-based conservation projects. One of these projects, Snow Leopard Enterprise (SLE), impacts poverty stricken communities in Mongolia, Kyrgyz Republic, and Pakistan. It assists over 300 families in its conservation efforts. The economic incentives provided via SLE have led participating communities not to harm the snow leopard or its prey, and to practice sustainable herding. Since the project began in 1997, the number of snow leopards harmed around the communities' territories has dropped to near zero. Additionally, the annual income of families that utilize the benefits of SLE has increased by 25% to 40%. SLE creates this economic benefit by providing the training and equipment necessary to make desirable products from the wool of herd animals. Snow Leopard Trust then purchases these handicraft items from the local people and markets them globally. Zoos can expand their conservation efforts by simply offering these items in their gift shops. Woodland Park Zoo (WPZ) was the first zoological institution to sell the products, and WPZ continues to generate revenue from them. SLE is a golden opportunity for zoos to increase revenue, assist poor families, and save an endangered species and fragile ecosystem.



(Photo taken in Mongolia by Fritz Polking - courtesy of the Snow Leopard Trust)

Introduction

The snow leopard (*Uncia uncia*) is well adapted to its home in the high, rocky mountains of Central Asia. Its coat of gray, white, and yellow marked with black and gray rosettes makes it virtually invisible when trekking across a jagged mountainside. The long, heavy tail of the snow leopard helps it to balance as it travels along ridges and ravines in the mountain ranges that it calls home. The snow leopard's large chest and nasal cavities aid the cat in respiring cold, oxygen-depleted mountain air. The chest cavity is large enough to allow the cat to remove all of the oxygen it needs from the air in each breath. The nasal cavity has enough space to allow the air to warm before coming in contact with sensitive lung tissues. (www.snowleopard.org).

The mountain ranges used by the snow leopard are found across twelve countries of Central Asia: Afghanistan, Bhutan, China, India, Kazakhstan, Kyrgyz Republic, Mongolia, Nepal, Pakistan, Russia, Tajikistan, and Uzbekistan. The snow leopard's range is approximately 1,230,000 square kilometers in size. It includes sections of the Gobi Desert and the Himalayas. Snow leopards are most often found between 3,000 and 5,400 meters above sea level. Radio telemetric studies show they have a strong preference for traveling on slopes greater than 40 degrees with clear edges such as ridgelines (McCarthy et al, 2003).

The home range size of the snow leopard varies according to prey densities. The mountainous regions

of Nepal provide substantial prey densities for the snow leopard. In Nepal, the snow leopard utilizes a home range the size of 12 to 39 square kilometers. Prey is much scarcer in Mongolia than in Nepal, requiring the snow leopard to travel greater distances between kills. In Mongolia, the snow leopard has been found to travel across more than 25 miles of desert to reach the next mountain slope. Home range size in Mongolia often exceeds 400 square kilometers (Mishra et al, 2003).

The prey of the snow leopard includes the marmot, chukar partridge, blue sheep, Asiatic ibex, markhor, and argali. Two of these prey species are very important to the survival of the snow leopard: the blue sheep or bharal (*Pseudois nayaur*) and the Asiatic ibex (*Capra ibex*). The Asiatic ibex is found throughout most of the snow leopard's range, while the blue sheep is found mostly in the Himalayas. In addition to meat, the snow leopard will consume significant quantities of plant material during mating season.

The snow leopard is an opportunistic predator, and will make use of domestic livestock as prey. The snow leopard will kill and eat domestic animals such as young yaks, horses, goats, and sheep. This occurs when livestock enter the snow leopard's range, or when the natural prey of the snow leopard becomes scarce.

The population size of the snow leopard is estimated to be between 3,500 and 7,000 individuals. The snow leopard is on the IUCN List of Threatened Species and classified as "endangered." The snow leopard population is projected to decline by as much as 50% in the next three generations due to pressures on the remaining population. These pressures include the traditional Asian medicinal trade, livestock conflicts, and declining range and habitat quality. With the exception of Kyrgyz Republic and Tajikistan, all snow leopard range countries have signed the Convention on International Trade in Endangered Species (CITES) of Wild Fauna and Flora, making it illegal to traffic live snow leopards or their body parts. Unfortunately, this law is not enforced well in many areas.

There are other threats to the snow leopard's survival, in addition to the pressures listed above. These threats include: habitat fragmentation, reduction of natural prey populations, fencing that disrupts natural migration patterns, secondary poisoning and trapping of snow leopards, disease, war, climate change, and human population growth. Poaching is a serious threat to the survival of the snow leopard and it occurs for a few different reasons. The snow leopard is sometimes hunted as a trophy, sometimes killed for body parts to be sold in the Asian medicinal trade, and sometimes killed as a threat to livestock (McCarthy et al, 2003). Often the economic hardship of the local people contributes to the reason behind the killing.

Loss of natural prey items is also a very serious threat to the survival of the snow leopard. When prey becomes scarce, the snow leopard is forced to increase range size (whether or not more land is available) and expend more energy between kills. Sometimes the snow leopard adapts to this situation by adding domestic livestock to its diet. This action creates resentment amongst the local people, many who live below the poverty level, as each member of the herd is crucial to the welfare of each family. Retaliatory killing is often the result of the snow leopard consuming domestic livestock (Mishra et al, 2003).

The natural prey of the snow leopard face threats to their survival similar to those of the snow leopard. They must survive through habitat degradation and fragmentation, reduction of natural food sources, fencing that disrupts natural migration patterns, poaching (for meat or trophy hunting), disease, war, climate change, and human population growth (McCarthy et al, 2003). A major threat to their survival is competition with domestic livestock. Studies show that there is a major diet overlap between the bharal (*Pseudois nayaur*) and most species of domestic livestock. As domestic herd sizes increase, the bharal and other natural prey species are pushed out of their range. With limited food resources, reproductive success drops (Mishra et al, 2003).

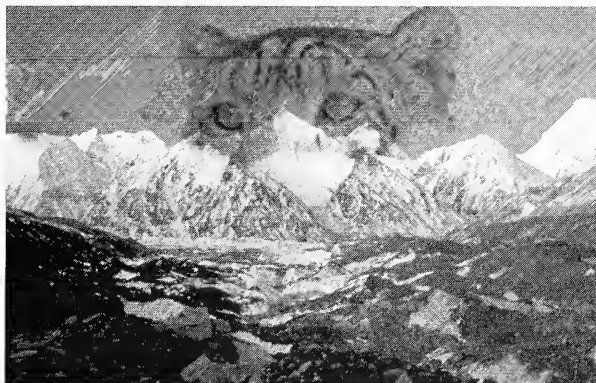
The harsh climate of snow leopard range is no less harsh to its human inhabitants. A significant portion of the human population in snow leopard range lives below the poverty level, relying solely on their herd animals for survival. Their herd animals provide them with valuable products such as meat, milk, and wool. However, many of the semi-nomadic communities must sell their raw wool at low cost to traveling traders due to the difficulty of traveling to a marketplace to sell their goods. This condition makes it difficult for them to increase their income (Akin, 2005).

The attitudes of the local people toward the snow leopard and toward conservation reflect this position in life. Many villages have high levels of retaliatory killing. In 2003, Mishra found that 14% of the 116 Mongolian herders he interviewed had hunted snow leopards. He also found that in India, families maintained an annual loss of half their annual per capita income to livestock predation. The government of India did provide compensation, but only for 3% of the total loss.

Snow Leopard Trust

The snow leopard has a strong ally in the Snow Leopard Trust. The Snow Leopard Trust is a non-profit organization dedicated to saving the snow leopard. It has been around for 25 years, longer than any other organization dedicated solely to this magnificent cat. The Snow Leopard Trust (SLT) employs staff in six countries: the United States of America, China, India, Kyrgyz Republic, Mongolia, and Pakistan. SLT staff works with local communities to create conservation programs that not only help to save the snow leopard and its habitat, but also to improve the lives of the local people (www.snowleopard.org).

Before starting a new conservation project, SLT does research to help develop a successful project. They find “hot spots,” or areas in snow leopard range that could potentially have a large impact on snow leopard populations. They research the major threats of the snow leopard in those “hot spots” so they know which threats to target. They talk to the local people and all stakeholders, in order to learn of their concerns and needs. Working with the local people, SLT drafts a plan that alleviates the threats of the snow leopard in the “hot spot,” and improves the lives of the local people. SLT believes that the success of their conservation programs is dependent on the support of the local people (Akin, 2005).



Big Mountain Gaze

Courtesy of Snow Leopard Trust

SLT was integral in the formation of the Snow Leopard Network. The Snow Leopard Network (SLN) was formed in May 2002 at the Snow Leopard Survival Summit in Seattle, WA, run by SLT. SLN is a partnership of groups and individuals who work together for the conservation of the snow leopard, its prey and habitat, and to benefit people and biodiversity. At the Snow Leopard Survival Summit the Snow Leopard Survival Strategy (SLSS) was drafted. The SLSS is a document that summarizes the knowledge that we currently have about the snow leopard, the research that needs to be done, the threats to snow leopard survival, and the potential means to overcome those threats. The SLSS breaks down this information country by country, to help government leaders develop action-plans for their own countries. The purpose of the SLSS was to provide comprehensive conservation and research guidelines to promote a coordinated effort to save the snow leopard (McCarthy et al, 2003).

Snow Leopard Enterprise

Snow Leopard Enterprise (SLE) was developed as a handicrafts conservation project that targeted poaching of the snow leopard in herding communities. It began in 1999 in Mongolia where rates of poaching were high. Sometimes snow leopards were poached for sales of their parts, and sometimes in retaliation for herd losses. The herding communities were semi-nomadic; their only source of income came from sales of raw wool to traveling traders that purchased the product at a low price. Most families were existing below the poverty level. SLE aimed to increase the income of participating families by helping them to improve their product – raw wool.

SLT provides a contract for the community and participating families to sign. The contracts are designed specifically for each community. Usually, SLE contracts ask that the villages promise not to harm the snow leopard or its prey, including protecting the snow leopard and its prey from poachers

outside of the community. Sometimes they ask that the communities cap their herd sizes. In exchange for this promise, SLT provides the training and equipment necessary for the communities to begin turning their raw wool into more valuable products. Some of these products include hats, scarves, gloves, slippers, bags and purses, centerpieces, coasters, cat toys, and Christmas ornaments.

The initial training process usually takes at least a year. In the first year, the community makes samples and trial products. They have to learn how to make products of a certain quality so that they will be marketable. SLT places an order with each community in the fall. The women of the families create the products all winter and SLT returns in the spring, as promised, to buy the products from the families. The reliability of SLT to follow through on their end of the bargain provides a good foundation for a mutually beneficial relationship between them and the local people (Akin, 2005).

SLT always honors the contracts by purchasing items from the communities that sign each year. To provide more incentive for the families to follow-through on their end of the bargain, SLT offers a bonus. If, in the year of the contract, no snow leopards or their prey have been harmed, the village receives a sizeable bonus. The bonus is 30% of the value of product produced by the community. 10% goes into a community fund, 20% goes directly into the hands of the participating families (Rullman, 2005).



Handbags produced by families involved in the Snow Leopard Enterprise project.

(Photo courtesy of Snow Leopard Trust)

When a poaching incident occurs, the bonus is lost. This has happened, and the people of the community involved were disappointed not to receive the bonus, but a good relationship was maintained when SLT followed through with purchasing product. As a result of the lost bonus, the community increased peer pressure and was motivated to make sure a poaching incident did not happen again in the next year. SLE has resulted in an annual income burst of 25% to 40% for participating families. Each year more women join the project (Akin, 2005). SLE has grown and expanded into three countries. Mongolia has 14 sites and 300 participating families. Kyrgyz Republic has two sites and 30 participating families. Pakistan has two sites and 75 participating families. *(This information is from 2006 – it is likely that more families and sites participate now.)*

The Conservation Program Coordinator oversees SLE in the United States. Each country that participates in SLE has its own country coordinator, and each site has its own local coordinator. The local coordinator is responsible for meeting with the participants, inspecting the products, and collecting the order. The women in the communities make most of the products since the men travel often during the year with the herds (Rullman, 2005).

Sometimes the women work in conditions that most of us would find very disheartening, but they take their work seriously. SLE began in Kyrgyz Republic in 2002 with the site of Ak-Shyirak. The women worked in a building with no heat, broken windows, a crumbling roof and foundation. In 2003 the women of Ak-Shyirak applied for a grant to fund the construction of a new workspace. They received the funding and now have much better working conditions. The families of Inilchek (another Kyrgyz Republic site) learned of the increased income that the families of Ak-Shyirak were receiving and expressed interest in participating in SLE. SLT quickly incorporated them into SLE, because of their

enthusiasm for the project, and because Inilchek bordered a nature preserve, making it a “hot spot” (Akin, 2005).

The participating families are using their additional income to buy foods they normally couldn't afford to buy, such as flour, sugar, and watermelon. They use the income to pay for medicine or visits to the doctor. In rare cases they can afford to buy clothes and/or send their children to school and buy school supplies. Even though the families are experiencing large boosts to their income, many still live below the poverty level. Work still needs to be done to improve their quality of life (Rullman, 2005).

The snow leopard has benefited greatly from SLE too. In the Kyrgyz Republic the snow leopard population dropped by as much as 50% in the 1990's. This population decline was a result of the poverty that followed the swift transition of the Kyrgyz Republic to a market economy with the fall of the Soviet Union. In desperation for money, the people were rampantly poaching and selling animal parts to the Asian market. At each site where SLE has been incorporated, poaching incidents have dropped to near zero, for both the snow leopard and its prey species. Locals will pressure outside hunters into leaving their area, making it clear to them that hunting of the snow leopard and its prey in their territory is not permitted (Akin, 2005).

Zoological Institutions and the Snow Leopard Trust

Zoos as conservation organizations would make a wise choice in partnering with SLT. SLT is a highly reputable organization with successful conservation programs, benefiting wildlife and people. Zoos can partner with SLT in a few different ways. They can offer joint memberships, host SLT speakers, display educational materials, and/or sell SLE merchandise (www.snowleopard.org). By offering SLE merchandise in their gift shops, zoos can support needy people and endangered species, increase revenue, educate the public on conservation issues, and empower the zoo visitor with the opportunity to personally support a conservation project by making a small purchase in the gift store (Adrian, 2005).

SLT makes it incredibly easy for a zoo to participate. Zoos are not required to meet any minimum purchase guidelines. They have the freedom to purchase the amount of product that they feel they need in order to test their market. They purchase all products at wholesale cost, and have the freedom to sell the products at whatever price they choose. Each product is individually tagged with a conservation message. The message briefly describes how the product supports the endangered snow leopard and people living in snow leopard range, and depicts the country where it was made. SLT will send educational graphics and display materials to help zoos educate their patrons on the origin and purpose of the products (Rullman, 2005).

Most zoo gift stores have begun to support conservation by offering a small percentage of products that support environmental, ecological, and/or social causes. In some zoos this small percentage is becoming larger. Gift store managers sell conservation products by showcasing the animals, people, and habitat supported by the product, utilizing graphics inside and outside of the store to spread the conservation message, and by reinforcing the specialty nature of the products. Occasionally, zoo stores will publicize the environmental or social effort in an attempt to increase traffic. ZooAtlanta publicized its participation in Toys for Tots in an effort to increase traffic and sales in its gift store. The gift store offered to collect donations for Toys for Tots and marketed potential items in the store as donation options. The effort was successful (Hansen, 2005).

Zoos can increase traffic, educate the public, and support conservation in one effort. For example, zoos can offer to be a donation site for Coats for Kids, similar to what ZooAtlanta did. Coats for Kids is a non-profit organization that not only distributes winter coats to needy children, but also other winter gear such as gloves, mittens, scarves, hats, etc. Zoos can publicize their involvement in Coats for Kids and then market SLE merchandise as possible donations (the mittens, hats, and scarves made by needy people in snow leopard country). Combining SLE with Coats for Kids has the potential to benefit the zoo and its gift store, the snow leopard and its prey, the impoverished people of snow leopard range country, and local needy children. The entire effort will market the zoo as an institution of community service, and as an advocate for environmental and social causes.

Zoo gift stores will profit from offering SLE merchandise to the public. Woodland Park Zoo began tracking sales of SLE merchandise in 2003. In the year 2003 they sold \$600 of the product. In 2004 they sold \$6,000 of product. In 2005 they sold \$10,000 in product (Blumer, 2005). This data shows that zoos can benefit financially from offering the product in their gift stores. By purchasing SLE products at wholesale, zoos are helping to offset costs assumed by SLT in creating and maintaining the SLE program.

Zoos should participate in SLE because of its multi-faceted nature. The design of SLE allowed it to become a project that has the potential to benefit zoos (as businesses and conservation organizations), the zoo visitor, SLT, the people of Pakistan, Mongolia, and Kyrgyz Republic, the snow leopard, and its prey. Participation in SLE can help increase traffic in the zoo itself and its gift store, and bring attention to an endangered species that many zoos exhibit. Zoos can utilize SLE to help publicize that they are quickly becoming major conservation institutions.

References

- Adrian, C. "Zoo Retail Report: Wild for Sales Zoo Shops Help Create Memories while Educating." *Souvenirs, Gifts & Novelties*. Vol. 44, No. 7. October 2005: 204-207.
- Akin, J. 2005 "Strategic Evaluation of the Community-Based Conservation Program of the Snow Leopard Trust." Master's thesis. University of Washington, Washington.
- Blumer, Terry. Zoostore Manager, Woodland Park Zoo. Personal correspondence. 2005.
- Hansen, M. "Zoos and Aquariums: A Realistic Perspective on Retailing." *Museum Store*. Vol. 33, No. 1. Spring 2005: 54-57.
- Mishra, Charudatt, et. al. "The Role of Incentive Programs in Conserving the Snow Leopard." *Conservation Biology*. Vol. 17, No. 6. December 2003: 1512-1520.
- Rullman, Jennifer. Conservation Program Coordinator, Snow Leopard Trust. Personal correspondence. 2005.
- Snow Leopard Survival Strategy. Thomas M. McCarthy and Guillaume Chapron, eds. Seattle, WA: International Snow Leopard Trust and Snow Leopard Network, 2003.

www.snowleopard.org

Big Cat Internships Available

Join us in
"Saving Tigers One by One"

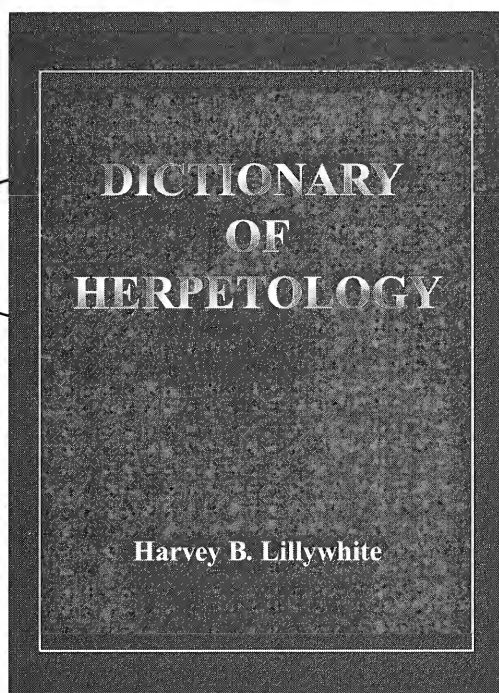
As seen on Animal Planet®
"Growing Up Tiger"



Learn about Big Cat Management. Internship involves Animal Care Apprentice and Public Education. We offer experience that counts towards employment.

TIGER MISSING LINK FOUNDATION / TIGER CREEK WILDLIFE REFUGE

An Updated Guide to Herpetology Terminology



Foreword by Roger Conant

Orig. Ed. 2008 384 pp. ISBN 1-57524-023-8 \$112.50

Following the historical precedent of Peters (1964), the new updated *Dictionary of Herpetology* provides a comprehensive, single-volume dictionary, with selected cross-referenced entries to clarify the many technical terms and concepts that pertain to herpetology. The *Dictionary* provides a complete collection of words that are central to understanding the biology of amphibians and reptiles, offering concise and easy-to-use readable definitions in an A-to-Z format that contains 11,358 entries. This reference is essential for students, professionals, breeders, or anyone who is interested in herpetology and its many interdisciplinary connections. The new *Dictionary* emphasizes terminology related to anatomy, physiology, systematics, evolution, and other disciplines, including newly emerged fields that are relevant to the study of amphibians and reptiles.

To place your order and obtain shipping costs call

1-800-724-0025

or e-mail us at: info@krieger-publishing.com



KRIEGER PUBLISHING COMPANY

P.O. Box 9542 • Melbourne, Florida 32902

Phone: (321) 724-9542 • Fax: (321) 951-3671

www.krieger-publishing.com

AAZK Logo Fleeces Now Available

AAZK has these great looking, long-sleeved fleeces available for sale on the Association website (www.aazk.org). They are made of an 80/20 cotton/polyester blend for durability and long wear. The AAZK logo is embroidered in full color on the left front. Fleeces feature a zippered front and ribbed cuffs and hemline.

The fleeces are available in blue and black. Blue fleeces are available in Large and X-Large only. Black fleeces are available in Small, Medium, Large and X-Large.

Fleeces sell for \$60.00 each and price includes postage and handling.

During the AAZK 2008 Conference in Salt Lake City, the fleeces will be **sale priced** at \$50.00 each so plan to buy yours there. Or if you are not attending the conference, send your order with a friend who is and save \$10.00! These fleeces are not only attractive, but durable and nice and warm for late fall into winter wear. You may also use the order form below. Mail order form, check or credit card information to: Fleeces, AAZK, Inc., 3601 SW 29th St., Ste. 133, Topeka, KS 66614-2054.



AAZK Logo Fleece Order Form

(please print all information on form clearly)

Please send _____ Blue fleece(s) in the following size(s) Large _____ X-Large _____
(indicate number of fleeces ordered in each size)

Please send _____ Black fleece(s) in the following size(s) Sm _____ Med _____ Lg _____ X-Lg _____

Number of fleeces ordered _____ X \$60.00 each = \$ _____ **TOTAL \$** _____

Mail to:

Name _____

Address _____ Apt. _____

City _____ State/Province _____

Zip/Postal Code _____ Email _____

Check Enclosed _____ (make out to AAZK, Inc.) Please charge: Mastercard _____ Visa _____

Card # _____ - _____ - _____ Exp. Date _____ / _____

Name on card _____

Wild Orangutans Declining More Sharply in Sumatra and Borneo Than Previously Thought

Endangered wild orangutan (*Pongo spp.*) populations are declining more sharply in Sumatra and Borneo than previously estimated, according to new findings published this month by Great Ape Trust of Iowa scientist Dr. Serge Wich and other orangutan conservation experts in *Oryx – The International Journal of Conservation*.

Conservation action essential to survival of orangutans, found only on the islands of Sumatra and Borneo, must be region-specific to address the different ecological threats to each species, said Wich and his co-authors, a pre-eminent group of scientists, conservationists, and representatives of governmental and non-governmental groups. They convened in Jakarta, Indonesia, in January 2004 to address the threats to orangutan survival and develop new assessment models to guide conservation planning.

New orangutan population estimates revealed in the July issue of *Oryx* reflect those improvements in assessment methodology – including standardized data collection, island-wide surveys, and better sharing of data among stakeholders – rather than dramatic changes in the number of surviving orangutans.

The experts' revised estimates put the number of Sumatran orangutans (*P. abelii*) around 6,600 in 2004. This is lower than previous estimates of 7,501 as a result of new findings that indicate that a large area in Aceh that was previously thought to contain orangutans actually does not. Since forest loss in Aceh has been relatively low from 2004 to 2008, the 2004 estimate is probably not much higher than the actual number in 2008. The 2004 estimate of about 54,000 Bornean orangutans (*P. pygmaeus*) is probably also higher than the actual number today as there has been a 10% orangutan habitat loss in the Indonesian part of Borneo during that period.



(photo: Mongabay.com)

“It is clear that the Sumatran orangutan is in rapid decline and unless extraordinary efforts are made soon, it could become the first great ape species to go extinct,” Wich et al. wrote. “Although these revised estimates for Borneo are encouraging, forest loss and associated loss of orangutans are occurring at an alarming rate, and suggest that recent reductions of Bornean orangutan populations have been far more severe than previously supposed.”

The new numbers underscore important issues in orangutan conservation. With improved sharing of data and deeper collaborations among stakeholders, the experts determined that 75% of all orangutans live outside of national parks, which have been severely degraded by illegal logging, mining, encroachment by palm oil plantations and fires due to a general lack of enforcement by regulatory authorities, who are either unable or reluctant to implement conservation management strategies.

However, some recent conservation successes – keyed on political and financial support, media attention and advocacy by conservationists – offer cause for cautious optimism that illegal logging in protected areas can be effectively reduced and improved management of protected areas can be attained, according to the experts.

“It is essential that conservation measures are taken to protect orangutans outside national parks, and these measures will by necessity be specific to each region,” Wich et al. wrote.

The experts reported positive signs that forest conservation is gaining prominence as a political agenda. For example, habitat loss has stabilized in some parts of Sumatra with a temporary logging moratorium in the province of Nanggroe Aceh Darussalam, where most of the island's orangutans occur, both in and out of national parks. Opportunities also exist to develop reduced-impact logging systems on the island of Borneo, where most orangutans there live in forests already exploited for timber.

Although other threats to orangutan survival exist, such as hunting in agricultural areas where human-orangutan conflicts exist, the biggest by far is forest destruction associated with the burgeoning palm oil industry in Indonesia and Malaysia. Together, they are world's largest palm oil producers with a combined global market share of 80.5%. Rapid expansion of the palm oil industry coupled with poor land-use planning are further pressuring forests and the orangutans who depend on them for survival.



(photo: Wikipedia.com)

For example, in Sumatra, the controversial Ladia Galaska road project in the Leuser Ecosystem will, unless halted, fragment two of the three largest remaining orangutan populations, Wich et al. wrote. A similar project in 1982 split the Gunung Leuser National Park, and the improved access facilitated uncontrolled illegal settlements inside the park, large-scale illegal encroachment and logging, and poaching of threatened species. Also cited as an example of faulty land-use planning was a mega rice project, funded primarily by Indonesia's reforestation fund, which eliminated 10,000 square kilometers of peat swamp forest and killed an estimated 15,000 orangutans from 1996 to 1999.

"Both are examples of ill-advised projects with few benefits to local economies but major environmental costs," Wich et al. wrote. "However, as such projects provide substantial revenue for a small group of individuals with considerable political influence, unprecedented political will is needed to prevent similar projects in the future."

The experts' report includes sweeping recommendations for:

- Effective law enforcement and prosecution to stop hunting orangutans for food and trade;
- Mechanisms to mitigate and reduce human-orangutan conflict in agricultural areas, including large-scale plantations;
- The development of an auditing process to assess the compliance of forestry concessions to their legal obligation to ensure orangutans are not hunted in concession areas;
- Increased environmental awareness at the local level, following examples set by the Sumatran Orangutan Conservation Program and the Kinabatangan Orangutan Conservation Project that promote awareness of conservation of forests and the importance of biodiversity;
- Development of mechanisms to monitor orangutan populations and forest cover, building on those in place on both Borneo and Sumatra;
- Continuation of surveys in less explored regions; and
- Continued improvement of survey methodology to include nest-decay rates.

“All efforts to monitor orangutans, however, will be to no avail unless the decline in numbers is halted, and this requires a change in political will,” Wich et al wrote. “It is essential that funding for environmental services reaches the local level and that there is strong law enforcement. Developing a mechanism to ensure these occur is the challenge for the conservation of orangutans.”

Great Ape Trust Director of Conservation Dr. Benjamin Beck said the paper makes a significant contribution to orangutan conservation discussion.

“First, we have an unambiguous, scientifically rigorous answer when regulators and policymakers ask us how many orangutans really remain, and how that compares to historical population sizes,” Beck said. “Those responsible for environmental stewardship cannot hide indecisively behind purported scientific uncertainty.”

“Second, those answers are the results of pooled knowledge of nearly two dozen high-profile investigators who set aside their own professional reputations and agendas to collect data in a standardized format and share the results for a very high, common priority: the literal survival of the species that they study and love,” Beck continued. “In addition to being a critical contribution to orangutan conservation, this paper is an exemplar of collaboration among conservation scientists and practitioners.”

In addition to his responsibilities at Great Ape Trust, Wich is co-manager of orangutan research at Sumatra’s Ketambe Research Center, one of the longest-running orangutan field study sites in the world.

Dr. Wich’s co-authors in the latest publication in *Oryx*, “Distribution and conservation status of the orangutan (*Pongo spp.*) on Borneo and Sumatra: How many remain?”, are: Erik Meijaard, Orangutan Conservation Services Program, Balikpapan, Indonesia, and Tropical Forest Initiative, The Nature Conservancy, Balikpapan, East Kalimantan, Indonesia; Andrew J. Marshall, Department of Anthropology and Graduate Group in Ecology, University of California, Davis, U.S.A.; Simon Husson, Wildlife Research Group, Department of Anatomy, University of Cambridge, U.K.; Marc Ancrenaz, Kinabatangan Orangutan Conservation Project, Sandakan, Sabah, Malaysia; Robert C. Lacy and Katy Traylor-Nolzer, IUCN (World Conservation Union)/SSC (Species Survival Commission) Conservation Breeding Specialist Group, Apple Valley, Minn., U.S.A.; Carel P. van Schaik, Anthropological Institute & Museum, University of Zurich, Switzerland; Jito Sugardjito, Fauna & Floral International – Indonesia Programme, Kompleks Pusat Laboratorium Univ Nasional, Ragunan, Jakarta, Indonesia; Togu Simorangkir, Yayasan (Yayasan Orangutan Indonesia), Pangkalan Bun, Central Kalimantan, Indonesia; Matt Doughty, United Nations Environment Programme – World Conservation Monitoring Centre, Cambridge, U.K.; Jatna Supriatna, Conservation International – Indonesia Programme, Jalan Pejaten Barat, Kemang, Jakarta, Indonesia; Rona Dennis, Center for International Forestry Research, Bogor, Indonesia; Melvin Gumal, Wildlife Conservation Society-Malaysia, Kuching, Sarawak, Malaysia; Cheryl D. Knott, Harvard University, Department of Anthropology, Peabody Museum, Cambridge, U.S.A.; and Ian Singleton, Sumatran Orangutan Conservation Programme, Medan, Indonesia.

GREAT APE TRUST BACKGROUND

Great Ape Trust of Iowa is a scientific research facility in southeast Des Moines dedicated to understanding the origins and future of culture, language, tools and intelligence. When completed, Great Ape Trust will be the largest great ape facility in North America and one of the first worldwide to include all four types of great ape – bonobos, chimpanzees, gorillas and orangutans – for noninvasive interdisciplinary studies of their cognitive and communicative capabilities.

Great Ape
TRUST OF IOWA

Great Ape Trust is dedicated to providing sanctuary and an honorable life for great apes, studying the intelligence of great apes, advancing conservation of great apes and providing unique educational experiences about great apes. Great Ape Trust of Iowa is a 501(c) 3 not-for-profit organization and is certified by the Association of Zoos and Aquariums (AZA). To learn more about Great Ape Trust of Iowa, go to www.GreatApeTrust.org.

Source: Great Ape Trust of Iowa Press Release 7/2/08

Orangutans and Palm Oil: What you can do to help

*By Ashley Sholder and Allison Toth
Conservation Education Department
Cleveland Metroparks Zoo, Cleveland, OH*

Indonesia is quickly losing its rain forests. In fact, this year it will be entered into the Guinness Book of World Records as the "country which pursues the highest rate of deforestation". Why is this happening? Largely in part to palm oil. The trend in health food is trans-fat free products which can be achieved by adding palm oil. Because of our strive towards healthier alternatives, this oil is gaining vast popularity on our supermarket shelves. Due to its benefits, palm oil is in approximately 10% of products. These products range from snack foods, cookies, soap, cosmetics, detergents, and bio fuel, as well as fry oil in many fast food chains.

Due to the increased harvest of palm oil, orangutans are being pushed closer to extinction everyday. Indonesia is the only place in the world where orangutans are located in their natural habitat. Within the next ten years all wild orangutans could face extinction if something is not done soon. Orangutans have only one offspring every six to seven years, making it difficult for the wild populations to handle such stresses of habitat loss. Everyday, thousands of hectares of virgin peatland forests are cut down for palm oil plantations, forcing orangutans to live in close proximity to each other, causing problems since orangutans are mainly solitary animals. They are also the only completely arboreal ape in the world, so they depend on the trees for survival.

Palm oil is the second most used edible oil in the world, and is a booming industry for indigenous people who struggle for survival. Palm oil plantations were created to help alleviate the deforestation problem in Indonesia, but are now part of the problem. Hungry orangutans commonly wander onto plantations in search of food, which includes palm oil tree seedlings. The loss of seedlings to orangutans means loss of money and profit to workers. "Plantation workers had to pay concession companies for the loss of the seedling, they had no choice but to pursue the primates" (www.cosmosmagazine.com). Trespassing orangutans have become a detriment to palm oil farmers and therefore are being eliminated. "At least 1500 orangutans perished in 2006, most as a result of deliberate attacks" (www.cosmosmagazine.com).

The problem does not end with orangutans. There are 80 species of mammals, several birds, reptiles, and plants being damaged by deforestation as well. "Peatland forests like those in Borneo are the most important ecosystems in the world, when it comes to absorbing and storing climate polluting carbon dioxide" (www.abc.net.au). Water and soil quality has diminished in these areas as well. In other words, this is an ecosystem in a dilemma. Eventually resources will diminish, and the demand for palm oil will be so high that supplies will not be met, and the economy could crumble. The sad truth is that not only is this ecosystem in trouble, but if non sustainable practices continue, the economy is in danger too.

However, there is hope. The Roundtable for Sustainable Palm Oil (RSPO) has developed strict criteria for plantations in Indonesia, to produce sustainable palm oil in ways that are friendly to not only the endangered species, but the environment. There are certain criteria that each plantation has to meet in order to be a part of the RSPO. These criteria combat the problems with the environment, as well as provide benefits to plantation workers and insure a future for the industry. Some of these criteria include: allowing indigenous people to have rights and be a part of the decision-making process; planning for long-term economic and financial variability; maintaining soil fertility and water quality; managing pests in environmentally-friendly ways; monitoring the status of endangered species and acting accordingly with conservation standards; reducing all waste and recycling; being energy efficient; eliminating fire clearing, except for specific conditions; respecting all rights of personnel such as paying at least minimum standards, eliminating exploitation and child employment,

and providing training for all employees (www.rspo.org). In November 2007, the process of labeling for sustainable palm oil on product packaging was implemented; however this is a very slow and involved process. Many companies have to go through many phases before they can even be considered as using sustainable palm oil.

Actions taken now can change the future for orangutans. The RSPO is in the process of mandating the clear labeling of products that contain sustainable versus non sustainable palm oil.

As a consumer you can go **A.P. E.**

A = always read the ingredient list on products

P = purchase products that are palm oil free or contain sustainable palm oil

E = educate yourself and others about the palm oil crisis.

Other action you can take include: write to your local supermarkets and urge them to avoid products that contain nonsustainable palm oil; write to government officials encouraging them to support the RSPO and their actions; contact manufactures that use palm oil in their products and persuade them to use sustainable palm oil or alternatives. Become an informed consumer and learn all that you can about how the choices that you make can affect the environment and wildlife around the world.



Cleveland Metroparks Zoo is working to inform staff about the palm oil crisis. Tabletop signs were placed in all employee break rooms educating staff members of the plight of the orangutans and the steps that can be taken to make a difference. These steps may seem simple, but we have noticed a change in the knowledge of our staff. We created a public display for our Earth Day event and the zoo is looking closely at items they purchase for functions and events. The zoo is planning to purchase palm oil-free candies for one of our biggest events, Boo at the Zoo. We also support orangutan conservation in Malaysia directly through HUTAN Kinabatangan Orangutan Conservation Project (KOCPP) and have been since 2000, to the tune of about \$50,000. Marc Ancrenaz of KOCPP works directly and very actively to try to address the palm oil trade and its effects on orangutans in and around Sabah. We encourage you to take similar actions. As you can see even a little effort goes a long way!

References Cited

"Impacts on the Rainforest and Wildlife in Borneo, Sumatra, and Papua New Guinea."
Environmental Impacts. 5 April 2007 <www.palmoilaction.org.au>.

"Indonesia deforestation harming climate, endangered species: WWF." ABC News. 27 February 2008 <<http://www.abc.net.au/>>.

Kusumadewi, Desi, comp. "Principle and Criteria for Sustainable Palm Oil Production."
Roundtable for Sustainable Palm Oil. 21 Dec. 2006. 30 July 2008 <<http://www.rspo.org>>

"Palm oil workers killing orangutans." 26 July 2007 <www.cosmosmagazine.com>.

An AAZK Conservation, Restoration, and Preservation Grant Project:
Houston Zoo North American River Otter (*Lutra canadensis*)
Latrine Site Survey

*By Carolyn Maddox, Keeper, Houston Zoo, Houston, TX
and Vicki Vroble, Environmental Educator, Houston Audubon Society*



Family group of otters at latrine site

Introduction

In 2004, Texas Parks and Wildlife Department held planning meetings in order to develop the Texas Wildlife Action Plan, a Comprehensive Wildlife Conservation Strategy. During the meetings, it was determined that the North American River Otter (NARO) be listed as a medium priority species of concern for the state (TPWD, 2007) due to the need for updated information on population and habitat requirements. The method currently used by the Texas Parks and Wildlife Department to survey for NAROs is bridge surveys. Bridge surveys are conducted under select bridges in 27 counties in East Texas every two to three years. All mammal tracks, including those made by NAROs, found under the bridges are recorded. Since bridge surveys document only the presence or absence of a species in an area, they cannot be used to determine the actual population of river otters.

The authors spent a week with Dr. Thomas Serfass, Associate Professor of Biology at Frostburg State University and initiator of the Pennsylvania River Otter Reintroduction Program, learning about the methods he utilizes to find NARO latrine (scat marking) sites. Predicting the locations of river otter latrine sites by examining habitat characteristics (Swimley, 1998), identifying otter scat, and installing remote camera systems, have been found in other states to be a more accurate way of determining population status and habitat usage. Scat samples collected from the latrine sites can be used for DNA testing to determine actual numbers and genders of otters visiting the site. The goal of this project was to conduct field surveys, applying knowledge learned from Dr. Serfass, at one to three sites within 60 miles of the Houston Zoo where confirmed and unconfirmed sightings of river otters had been reported. Another goal was to increase awareness of the presence of North American River Otters as many people in the Houston area are not aware that those playful creatures they see on exhibit in the Children's Zoo live right here in Texas.

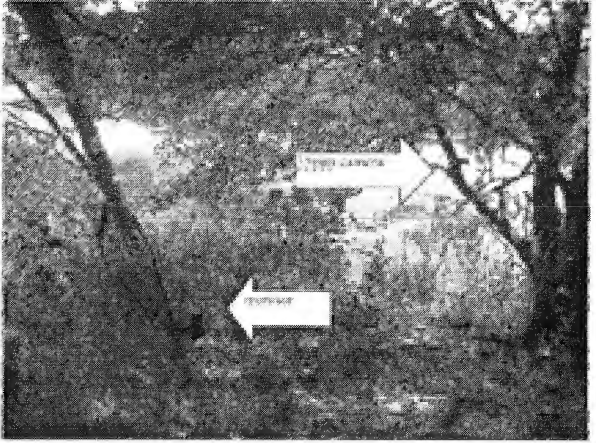
Materials and Methods

Starting in May 2005, field surveys were conducted at three locations: Brazos Bend State Park, Lake Houston, and the Armand Bayou Nature Center. These surveys were conducted on foot, with the exception of Armand Bayou, where the survey was conducted by canoe. The surveys, carried out through January 2006, were unsuccessful in locating physical evidence of the presence of NAROs.

The Texas Parks and Wildlife Department suggested contacting Dan Hepker of Texas Nuisance Wildlife Relocation, to assist in finding a latrine site. Mr. Hepker recommended surveying a levee at the Wallisville Lake Project which is maintained by the Army Corps of Engineers. An MOU between the Wallisville Lake Project and the Houston Zoo, Inc. was established. The agreement granted zoo staff access to the site and the Wallisville staff use of all the data and photographs collected for their own information and educational purposes.

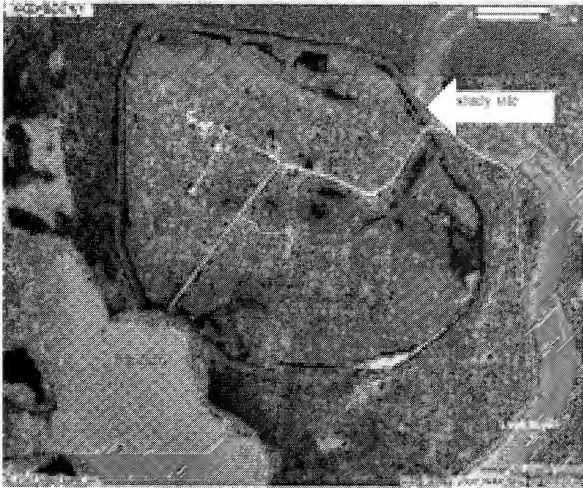
In March 2006, a survey was conducted on the levee which is located in an oil field not accessible to the public. Two latrine sites were located on the most easily reached part of the levee. One site showed more evidence of otter activity and appeared to serve as a crossing to and from Lost River.

On 30 August 2006, a remote 35mm camera system was installed at the site with the most otter activity. The remote camera system used was a Trailmaster® 35mm weatherproof camera (TM 35-1 Camera Kit) and a Trailmaster® 550 Passive Infrared Game Monitor.



Remote camera system at Wallisville Lake Project

The system and site were checked weekly. Camera data sheets, modeled after the ones Dr. Serfass and his graduate students used, were devised to record information regarding site conditions and presence of scat. Scat was rated on a scale of 1- 4 according to freshness with #1 representing old and bleached out scat and #4 representing very fresh scat. A data sheet was completed during every visit to the site.



Aerial map of levee on Wallisville Lake Project

The rangers on staff at the Wallisville Lake Project were taught how to maintain the camera equipment and record data at the site, which they did on a weekly basis. The authors visited once a month to collect the film and data sheets from the Wallisville staff. They also inspected the site and conducted further surveys; however, no additional latrine sites were located. Due to time constraints and inaccessibility of some areas, it was impossible to survey the entire levee.

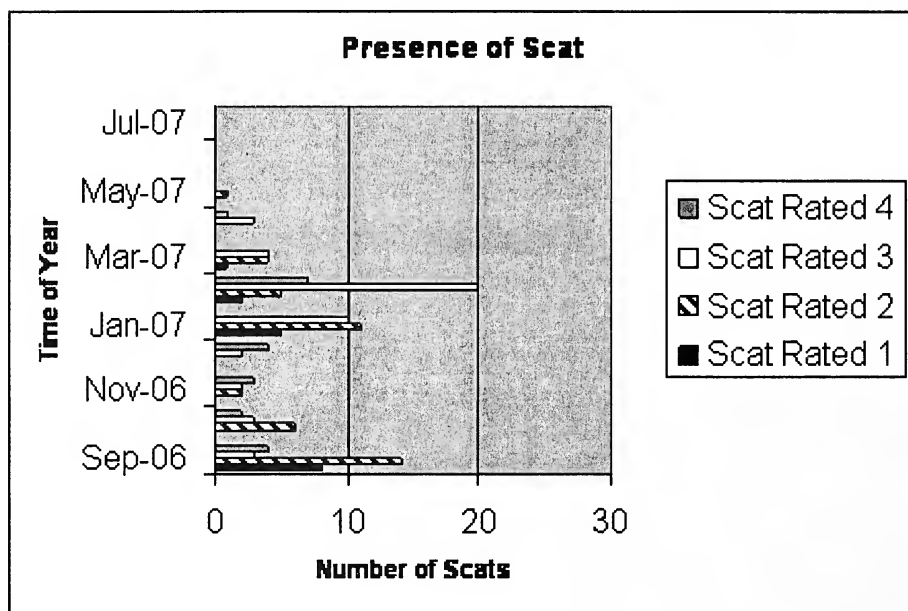
The study ended 24 July 2007, a month earlier than planned, due to a breach in the levee which caused flooding in the area. The monitor was underwater but the camera was removed safely. Other technical difficulties encountered included rodents chewing through the camera cable and the accidental triggering of the monitor. Because of the monitor's sensitivity, factors such as sunlight and wind could cause an entire roll of film to be used up in one day resulting in the loss of a week's worth of data.



Otter curiosity was another factor influencing the triggering of the monitor

Results

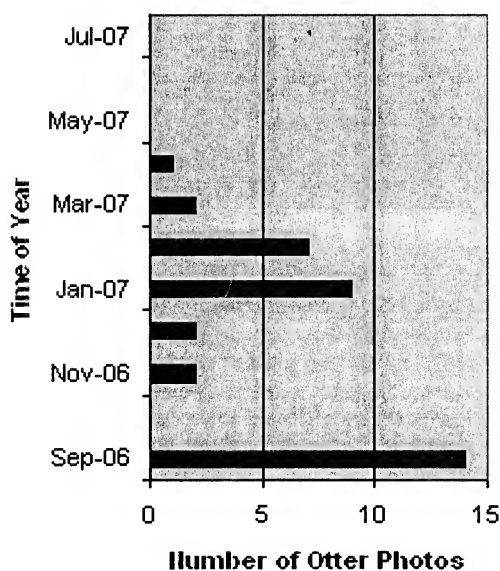
Very fresh scats were observed for the first time on 14 September 2006. September, January and February were the months with the most scat evidence. The majority of the scats were found on top of the levee. Beginning in April, the authors observed a decline in scat evidence. In June and July, no evidence of scat was found.



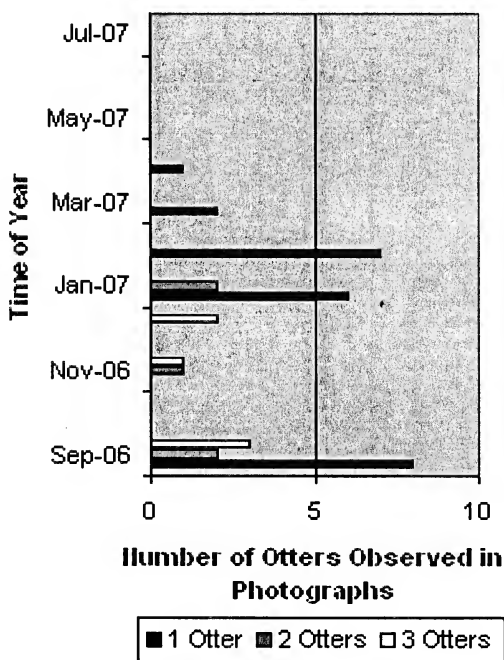
Scat Rating Key: 4 – very fresh, 3 – fresh with plenty of color, 2 – a little color but old, 1 – dried/bleached out

The first photographic evidence of otters was captured by the camera on 2 September 2006. A single otter was photographed on that day headed to the Lost River side of the levee. On 6 September 2006, a family group of three otters were photographed heading to the Lost River side of the levee. This family group appeared quite frequently through 11 September and again between 30 November and 8 December 2006. The months with the most otter photos were September, January and February, the same months which showed the most scat evidence. The last otter photo was taken on 11 April 2007. This coincided with the absence of scat evidence at the latrine site.

Evidence of Otters in Photos



Evidence of Otters in Photos



Conclusion

Although the authors were able to locate only one latrine site, the data confirmed not only the presence of North American River Otters at the Wallisville Lake Project, but also the diversity of wildlife that shares their habitat. Other species caught on film included: raccoon, opossum, alligator, armadillo, rabbit, nutria, deer, feral hogs, and bobcat. The photos captured are being used in educational presentations by the authors and in an educational display at the Wallisville Lake Project visitor information center. An interpretive graphic with a photo of the otter family at the latrine site is on display at the Texas State Aquarium in Corpus Christi.



Single otter at latrine site

Since the water has receded at the latrine site, a new system involving up to three digital cameras will be installed at the site. Digital cameras were selected to replace the film camera in order to: avoid problems with the film being used up too quickly; lower the cost of film processing; and reduce the number of maintenance visits. Data will be collected for at least another year at this location in order to make a comparison with the previous year's data. Surveys for other latrine site locations within the Wallisville Lake Project or in other potential habitat sites surrounding the Houston area will also be conducted. Further applications of this study could include DNA analysis of scat samples to determine population estimates or feeding habits of the otters visiting the site.

The authors would like to thank: The AAZK Grants Committee, Houston Zoo Conservation Committee, Peter Riger, Tinker Boyd, Houston Zoo staff who supported our efforts in the field, Dr. Tom Serfass, Dan Hepker, and the Wallisville Lake Project Director: Richard Long, and Rangers: Ruth Millsaps and Russell Malahy. This project could not have been completed without their help.

Acknowledgements

The authors would like to thank: The AAZK Grants Committee, Houston Zoo Conservation Committee, Peter Riger, Tinker Boyd, Houston Zoo staff who supported our efforts in the field, Dr. Tom Serfass, Dan Hepker, and the Wallisville Lake Project Director: Richard Long, and Rangers: Ruth Millsaps and Russell Malahy. This project could not have been completed without their help.



Carolyn Maddox and Vicki Vroble
(aka the Houston Zoo Otter Scat Squad)
with the first scat discovered at the latrine site

References

Swimley, Thomas, Thomas Serfass, Robert Brooks, and Walter Tzilkowski. "Predicting river otter latrine sites in Pennsylvania." *Wildlife Society Bulletin*. 1998. 26 (4): 836-845.

Texas Parks and Wildlife. 26 Oct. 2007. Texas Wildlife Action Plan. 14 Apr. 2008. http://www.tpwd.state.tx.us/publications/pwdpubs/pwd_pl_w7000_1187a/

Products mentioned in text

Trail Master Infrared Train Monitors
Goodson & Associates, Inc.
10614 Widmer
Lenexa, KS 66215
<http://www.trailmaster.com>

*(Site photos provided by the authors.
Aerial map from Mapquest®)*

It's Easy To Be Green!

Samples of Environmental Awareness at the 2008 AAZK National Conference

By Jane Larson
2008 AAZK Conference Committee
Salt Lake City, UT

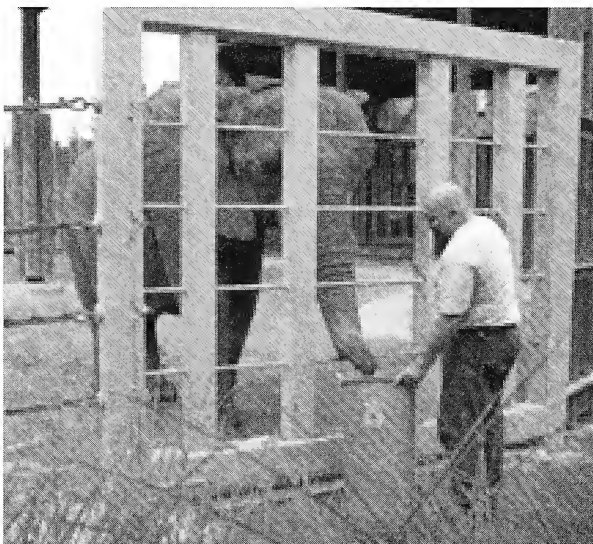
The Utah Chapter of the AAZK is committed to making the 2008 National AAZK Conference as green as economically and logistically possible. We hope that everyone embraces this idea and supports and understands what we are attempting to do.

The bags that all delegates will receive when they register were purchased from Ten Thousand Villages, which is a fair trade business located here in Salt Lake City. It was important for us that we bought the delegate bags from a group where the money would make a substantial difference, and that they were not created specifically for the conference. A woman's group in Bangladesh that has had a long-term relationship with Ten Thousand Villages made them. Due to the support they receive from groups like Ten Thousand Villages, these women are now able to afford medical care and education for their children.

Our plan is to only place several very usable items in the bags and not just fill them with stuff that eventually gets thrown out or given away. We wanted to provide writing utensils for all the delegates. Some liked pencils, some preferred pens, so we are providing both. Both the pens and pencils are made of recycled materials. In order to cut down on plastic use, we are not providing bottled water at the conference. Instead, we are providing delegates with their own bottles, and we will have drinking water available in large orange jugs. For those who prefer cups, we will have large souvenir-type cups available at the registration table. We will provide many reminders to bring along your cups/bottles.

This one is really exciting, there will be recycling containers placed at all of the activity areas, including the hotel and off-site areas. We are able to recycle plastics 1-7, newspaper, magazines, catalogs, paper, aluminum, tin, cardboard and clean Styrofoam®. We will also be using compostable materials. At both the Icebreaker and the Hospitality Suite, the serve ware will be either compostable or recyclable.

Many of the lanyards that the delegates will receive with their name badges in them were sent to us from Moody Gardens from the 2007 conference. Animal Capture Equipment (ACE) donated the remaining needed lanyards. Yeah ACE! We will then send all of our lanyards to the Woodland Park Zoo and the Puget Sound AAZK Chapter hosts for their conference next year, and hopefully we can keep doing that year after year until they are ready to fall apart.



It's not always easy being green but if we work together it will happen. Hogle Elephant keeper Doug Tomkinson and "Christie" show that they are pitching in to make 2008 a truly "GREEN" conference. (Photo: Matt Bates)

The centerpieces also have a green twist. They were intentionally created to be able to be reused or eaten. The centerpieces at the banquet will be made of reusable items, and the centerpieces at Zoo Day will be wheat grass that we can later feed out.

Of course, the paper the program is printed on is recycled paper and on the small side. There are blank pages in the book so everyone can take notes.

We also looked at reducing our fuel consumption for the conference. We will provide idling information to the bus and van drivers and ask them not to idle when waiting for us. We really like the location of our Icebreaker. It is so close to the hotel that you can walk or take TRAX, our light rail system. The TRAX station is very near the hotel, so no buses will be needed for the Icebreaker!

Not only is being green about how the conference is run, we want to change how delegates think about how they can be green. So, throughout the week, we will be throwing out all kinds of green information. We will test their knowledge and they may go home with some fun prizes!

Being green starts with re-thinking how you do things. We are striving to make being green easy at the conference and empowering people to learn more about how they can make a difference to our world!

Endangered Deer Released in Thailand

Thailand released nine critically endangered deer from a species that vanished from the wild three decades ago, in a bid to bring ecological balance to one of the country's national parks.

The nine Thamin deer (*Cervus eldi*) were released with radio collars into Huay Kha Khaeng Wildlife Sanctuary in central Thailand. They joined 25 others that were set free in May as part of a five-year program by the Thai government and universities, the Smithsonian's National Zoological Park and the Wildlife Conservation Society established to save the deer, which have disappeared in the wild in Thailand but still remain in neighboring Myanmar.



(Photo: ChinaNews.com)

"If we don't do this, the deer will go extinct forever," said Boripat Siriaronrat, research veterinarian at the state-sponsored Zoological Park Organization, who took part in the release. "Somebody needs to bring them back. They are a missing piece of the ecosystem."

The deer—famous for males that have C-shaped antlers—were once a common site in Thailand but were driven to near extinction by habitat loss and hunting. They are part of a family known as Eld's deer, which includes the Sangai deer in India and the Siamese Eld's deer in Cambodia and Laos. Other names include Bog deer and Hainan Slope deer.

Anak Pattanavibool, Thailand country director for the Wildlife Conservation Society, said the deer will complement five other species of hoofed animals that leopards, tigers and wild dogs depend upon for prey. "To get them back into the wild is good," Anak said. "In the end, it will complement the system and benefit the conservation of the whole wildlife area." About 1,000 of the deer live in Thai breeding centers.

Long before their release, Boripat said authorities took a number of steps to ensure the deer would survive. They carried out a series of controlled burns to create the open spaces the deer prefer so they can scan for predators. They also ensured the herd had genetic diversity and screened them for diseases such as tuberculosis and foot and mouth disease.

Boripat said it is too early to say whether the program is a success, acknowledging that a handful of the deer have been killed. "Some have been taken by leopards but that is a function of the ecosystem," he said. If the program goes well and the deer establish themselves in the park, Boripat said the government is considering releasing hog deer—which are limited to one park in the country's northeast—as well as Sarus cranes. "We feel responsible to take this challenge into our hands and do something about it," he said. Source: *TwinCities.com* and *ZooNews Digest* 550 8/11/08

Gorilla Find in Congo Stuns Primatologists..... Gives Hope for Species' Future

An estimated 125,000 Western lowland gorillas (*Gorilla gorilla gorilla*) have been found living in a swamp in equatorial Africa, researchers reported in early August doubling the number of the endangered primates thought to survive worldwide. The gorillas were discovered in an 18,000-square-mile (47,000-square-kilometer) deeply forested area of the Republic of Congo

"It's pretty astonishing," Hugo Rainey, one of the researchers who conducted the survey for the U.S.-based Wildlife Conservation Society.

Estimates from the 1980s had suggested fewer than 100,000 of the great apes had survived and many experts believed these numbers had been cut nearly in half by disease and hunting.

"This is a very significant discovery because of the terrible decline in population of these magnificent creatures to Ebola and bush meat," said Emma Stokes, another member of the research team.

WCS survey teams conducted the research in 2006 and 2007, traveling to the remote Lac Tele Community Reserve in northern Republic of Congo, a vast area of swamp forest. Acting on a tip from hunters who indicated the presence of gorillas, Rainey said that the researchers trekked on foot through mud for three days to the outskirts of Lac Tele, about 80 kilometers (50 miles) from the nearest road.

"When we went there, we found an astonishing amount of gorillas," said Rainey, speaking from the International Primatological Society Congress in Edinburgh, Scotland.

Though researchers did spot some gorillas, they based their estimate on the number of gorilla nests found at the site, Rainey said. Each gorilla makes a nest to sleep in at night. "This is the highest-known density of gorillas that's ever been found," Rainey said.

Craig Stanford, professor of anthropology and biology at the University of Southern California, said he is aware of the new study. "If these new census results are confirmed, they are incredibly important and exciting, the kind of good news we rarely find in the conservation of highly endangered animals."



A silverback and his family were among the newly discovered population of Western lowland gorillas in northern Congo. (Photo: yahoo.com)

Western lowland gorillas are listed as critically endangered, the highest threat category for a species. Their populations are declining rapidly because of hunting and diseases like Ebola hemorrhagic fever, whose symptoms include diarrhea, vomiting and internal and external bleeding.

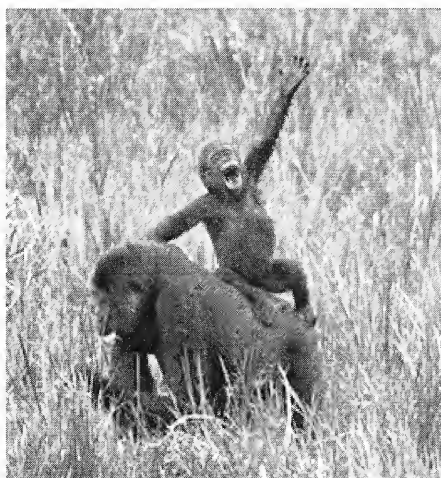
While the discovery in northern Congo indicates that the gorilla population remains stable in some areas, it is likely that gorillas will remain critically endangered because the threats facing the species are so great, Rainey said. "We know very little about Ebola and how it spreads," he said. "We don't even know the animal that spreads it around." The goal now, Rainey said, is to work with the Congolese government and donors to protect the areas in which the gorillas are known to be living.

While calling the new census important, Stokes said it does not mean gorilla numbers in the wild are now safe. "Far from being safe, the gorillas are still under threat from Ebola and hunting for bush meat. We must not become complacent about this. Ebola can wipe out thousands in a short period of time," she said.

According to the WCS, Western lowland gorillas, which are found in Cameroon, the Central African Republic, Equatorial Guinea, Gabon and Nigeria as well as the Republic of Congo, are the most numerous and wide-ranging of the four gorilla subspecies, each of which is threatened by extinction.

Illegal hunting and habitat loss have also threatened the Cross River gorillas (*Gorilla gorilla diehli*), found in the highlands of Cameroon and Nigeria. Only about 250 to 300 are estimated to remain in the world, the WCS says.

War, habitat loss, poaching and disease are the major threats to the mountain gorillas (*Gorilla gorilla beringei*), made famous by researcher Dian Fossey and the film "Gorillas in the Mist." The mountain gorilla population is starting to recover after decades of conservation work. From a population of around 230 in the 1970s, the mountain gorillas now number around 700, according to WCS estimates.



A youngster and mother Western lowland gorilla among the newly discovered population found in northern Congo. (Photo:

yahooonews.com)

Poaching and war have also threatened populations of Grauer's gorillas (*Gorilla beringei graueri*) in the eastern Democratic Republic of Congo, the former Zaire. The WCS estimates their population to be around 16,000.

News of the discovery of the Western lowland gorillas in northern Congo came during the same week as a report that almost 50% of the world's primates are in danger of extinction.

The report also cites habitat loss and hunting as the greatest threats. The situation is especially dire in Asia, where the report says more than 70% of monkeys, apes, and other primates are classified as vulnerable, endangered, or critically endangered.

The report was released as primatologists in Edinburgh, Scotland warned that nearly half of the world's 634 types of primates are in danger of becoming

extinct due to human activity. That figure, carried in a comprehensive review of the planet's apes, monkeys, and lemurs, included primate species and subspecies. Conservation International and the International Union for Conservation of Nature issued the report.

Scientists meeting at the International Primatological Society Congress in Edinburgh said they hoped the report will help spur global action to defend mankind's nearest relatives from deforestation and hunting. Excerpt Sources: www.chinaview.cn; www.yahooonews.com; Associated Press; www.cnn.com ~ 8.5.08

Human Ovulation Predictor Test Kits Found Non Responsive in Detecting Orangutan Ovulation

By Lyn Myers, Senior Keeper; Nannette Driver-Ruiz, and Sarah Acosta, Keepers
Fresno Chaffee Zoo, Fresno, California

Abstract

Ovulation in Orangutans (*Pongo pygmaeus*) is currently and reliably detected using urinary hormone analysis. This expensive method yields accurate results, although the results are not timely. Our objective was to find an alternative method to predict ovulation that was just as accurate, was less expensive and would generate immediate results. Chaffee Zoo tested three brand name, commercial ovulation predictor kits. Our baseline was established using laboratory urine analysis to compare with the results of the ovulation predictor kits. All of the brands tested gave a false negative result during the confirmed ovulation period.

Introduction

Unlike other ape species, female orangutans show no physical swelling to indicate the onset of ovulation. This can make estimating a reproductive cycle more difficult. It is helpful that Nadler (Graham, Charles E., 1988, pp94) found that the average cycle in the orangutans to be a span of 27-33 days with a mean of 27.8 days. Knowing the length of an average cycle still does not ascertain the exact start of the ovulatory phase.

Currently, the most reliable and accurate technique is to detect hormonal fluctuations through the use of urine/fecal hormone analysis. This consists of gathering and freezing daily samples for several months. These samples are then analyzed by a laboratory, which determines the hormonal changes that occur during a reproductive cycle. With this data, you can confirm and track past ovulations, and estimate future ovulations providing your individual is cycling within normal intervals. Unfortunately, this process can be costly, time consuming, and due to the nature of the test, and the results are always post-ovulatory.

Our intention at Fresno Chaffee Zoo was to define an 'in-house', and inexpensive method to identify ovulation in an orangutan. The commercial ovulation predictor test kits were selected for several reasons; they were readily available, inexpensive, and easy to use. They were reportedly 99% accurate for use in humans. All of the commercial over-the-counter test kits available identify the luteinizing hormone (LH) peak that occurs prior to ovulation. LH is always present in human female urine, but the level increases in the middle of the cycle causing the release of an egg from the ovary 24-36 hours later.

Our search for information regarding the use of ovulation test kits with great apes revealed that very little research has been done in this area. Abello & Flame (2005) have documented successful results with the use of ovulation test kits. They were able to utilize these strips to detect LH peaks in Western lowland gorillas (*Gorilla g. gorilla*).

Method and Materials

Initially we intended a larger study group, but due to financial constraints, we limited the study to the orangutans (*Pongo pygmaeus abelii*) at Fresno Chaffee Zoo. Our study group comprised of two adult female orangutans; ages approximately 16 and 32.

Control: To establish our control, our orangutans were trained to urinate in a clean container each morning. For the first month 10cc of urine from the clean catch was frozen daily at -20°F [-28.8°C]. These samples were sent to Conservation and Research for Endangered Species (CRES)

for urine hormone analysis to establish a baseline of ovulation. The data that CRES provided revealed the orangutan's last ovulation and gave us the data to determine the testing period for the next three months. During this phase of the project the results from CRES revealed that our 32-year-old female was not showing an ovulation cycle. Due to this data we continued the test strip study only with our 16-year-old female orangutan.

Test Kits: Answer®, Clear Blue Easy®, and Accu-Clear® were the three brands chosen for the project. All three of these brands respond to the lutenizing hormone peak found just before ovulation occurs.

For the following three months urine was collected in the same manner separating 10cc for CRES to verify ovulation. The remainder of the same urine samples, approximately 10cc each, were used with the test kit.

Each test kit was used for a period of 10 days surrounding the estimated time of ovulation. The enclosed directions were followed for each test kit.

- Answer®- The stick's absorbent tip was placed in urine for five seconds. The stick was laid flat and results were read at five minutes. The appearance of a second purple line in the result window would indicate the LH peak.
- ClearBlue Easy®- The stick's absorbent tip was placed in urine for 20 seconds. The stick was laid flat and its cover replaced. The test results were read at three minutes. The appearance of a second line would indicate the detection of the LH peak.
- Accu-Clear®- The stick's absorbent tip was placed in urine for five seconds. The stick was laid flat and results were read in 10 minutes. The appearance of a second line would indicate the detection of the LH peak.

Results

The first month of testing was November 23, 2005 through 2 December 2005. All three brands of test kits were tested for a 10-day period. Each of the 10 days of testing revealed a negative response in detecting an LH peak. CRES results indicated an ovulation for the 16-year-old orangutan on 29 November 2005.

The second month of testing began 24 December 2005 through 2 January 2006. Each of the 10 days tested revealed a negative response indicating no LH peak. CRES results indicated ovulation for the 16-year-old orangutan on 1 January 2006.

The third month of testing began 26 January 2006 through 4 February 2006. Each of the 10 days of testing revealed a negative response in detecting a LH peak. CRES results indicated ovulation on 2 February 2006 for the 16-year-old orangutan

LH should have been revealed 24-36 hours prior to ovulation.



Female Orang Siabu
(photo by Nathan Sunderson)

Table 1 summarizes the results of the project.

Table 1-Ovulation Predictor Kit Results

	23-Nov	24-Nov	25-Nov	26-Nov	27-Nov	28-Nov	29-Nov	30-Nov	1-Dec	2-Dec
Answer®							XXXXX			
ClearBlue®							XXXXX			
Accu-Clear®							XXXXX			

	24-Dec	25-Dec	26-Dec	27-Dec	28-Dec	29-Dec	30-Dec	31-Dec	1-Jan	2-Jan
Answer®									XXXXX	
ClearBlue®									XXXXX	
Accu-Clear®									XXXXX	

	26-Jan	27-Jan	27-Jan	28-Jan	29-Jan	30-Jan	31-Jan	1-Feb	2-Feb	3-Feb
Answer®									XXXXX	
ClearBlue®									XXXXX	
Accu-Clear®									XXXXX	

||||| Pattern indicates negative LH response XXXXX Ovulation identified by CRES

Discussion

Wild orangutan populations continue to decrease at a rapid pace. Fires, logging, palm oil plantations and the illegal pet trade are just a few of the threats that continue to push this species population to a breaking point. Over the last century, orangutan populations have dwindled by 90%, while approximately 80% of the habitat has been lost in the last 20 years (BOS, 2006). If these threats continue at this pace, it has been estimated that viable populations will be gone in less than 20 years. Due to these alarming statistics, it is imperative that we continue to learn as much as possible to assist both wild and captive orangutan populations.

The Species Survival Plan (SSP®) manages the captive breeding of many species in order to maintain a healthy and self-sustaining population that is both genetically diverse and demographically stable (AZA, 2006). In captivity, orangutans have reproduced quite easily, although when SSP® recommends a breeding transfer for an orangutan, it can present challenges to an institution. These challenges include: a lengthy permit process, expensive shipping costs, long physical and psychological re-adjustment periods, and possibly difficult animal introductions. With these difficulties in mind, we believe that assisted reproductive techniques, such as artificial insemination could be an alternative to transferring orangutans from institution to institution. One of the first steps in assisted reproductive techniques is to identify the onset of each ovulatory cycle. We researched the ovulation predictor kits because they are less expensive than laboratory testing, and report accuracy of 99% in detecting human LH, 24-36 hours before the onset of ovulation.

Ovulation prediction kits have not been thoroughly investigated for use in great apes. This study due to its limited size, cannot rule out their use with orangutans, but its findings should be considered in the development of future research in this area. A possible explanation for the strips inability to detect the LH may be found in Nadler’s notes, “that orangutan LH cross-reacts with antibodies to human LH to a lesser extent than does that of gorillas and chimpanzees, indicating greater biochemical differences.”

Acknowledgements

We would like to acknowledge the Meyer-Reed Fund along with the docents and education staff of the Fresno Chaffee Zoo for providing financial support for this research project. We would also like to thank Nancy Czekala of CRES for her guidance and support.

Bibliography

- Abello, M.T., & Flamme, G. (2005) Monitoring ovulatory cycles in Western lowland gorillas at Barcelona Zoo. *International Zoo Yearbook*. 39,185-191.
- American Zoological Association (2006) Species survival plan. Retrieved December 2, 2006 from <http://www.aza.org/ConScience/ConScienceSSPFact/>.
- Borneo Orangutan Survival Foundation UK.(2006) Saving the orangutan. Retrieved November 30, 2006 from <http://www.savetheorangutan.org.uk/>.
- Graham, Charles E., (1988).Reproductive Physiology. Schwartz, J.H. (Ed.),*Orangutan Biology* (pp.94). New York; Oxford University Press.
-

Zoo's Panda Population Drastically Reduced Following Earthquake in China

Only seven Giant Pandas (*Ailuropoda melanoleuca*) remain at China's most famous breeding center, after a final group of 13 animals were transferred from the earthquake-damaged facility. Most of the pandas at the Wolong Nature Reserve, tucked in the lush mountains of Sichuan province, had already been moved following the powerful May 12th quake that rattled Sichuan province and killed nearly 70,000 people.

The quake killed at least one panda and left the Wolong center vulnerable to aftershocks and landslides.

The 13 giant pandas arrived at the Bifengxia Giant Panda Base in the Sichuan province town of Ya'an on 21 July, said Li Desheng, research director at Wolong. Only seven one-year-old cubs remained at the center.

"This is because the staff at Wolong really loves pandas, and they wanted to keep some little ones," he said in a telephone interview. "They are the hope for the future reconstruction of the panda base."

There were 63 pandas living at the Wolong center when the quake struck. The others have been moved to Bifengxia and a breeding center in the provincial capital of Chengdu. Facilities in the Chinese capital of Beijing, the eastern province of Fujian and the southern province of Guangdong are also keeping Wolong pandas.

The Wolong reserve is at the heart of China's effort to use captive breeding and artificial insemination to save the giant panda, which is revered as an unofficial national mascot. Plans for the facility's reconstruction have not been decided, the official Xinhua News Agency reported.

Meanwhile, an eight-year-old panda evacuated from Wolong gave birth to a set of twins on 21 July at her new home in Bifengxia, state broadcaster CCTV reported. News footage showed a staffer holding a newborn panda, hairless and squirming, in an incubator.

Only about 1,600 pandas live in the wild, mostly in Sichuan. An additional 180 have been bred in captivity, many of them at Wolong, and scores have been loaned or given to zoos abroad, with the revenues helping fund conservation programs. *Source: www.FoxNews.com 7-22-08*



Animal Training Committee AAZK, Inc.

Training Tips: Who's Watching Who?

By

*Vernon Presley, ATC Member
Toronto Zoo, Toronto, Ont. Canada*

The AAZK Animal Training Committee strives to support the mission of AAZK, Inc. by providing information and learning opportunities for animal care professionals to facilitate the use of operant conditioning and other training techniques, to achieve behavioral management goals and excellence in animal care.

Last month we introduced our new series called 'Training Tips', where we examine ways to improve our skills as trainers. These are similar to Karen Pryor's 'Ten Laws of Shaping' (1985), as they are applicable to all types of trainers. This 'Tips' article focuses on developing an awareness of how the trainers behavior affects training sessions.

When we train animals we tend to concentrate on the animal's response to our communication with them. We focus on their actions so that we can reinforce specific criteria or desired approximations towards the finished behavior. But what is the animal focused on? Hopefully, it is watching the trainer and trying to interpret the behavioral cues provided. But are we as trainers always aware of all the information we are giving our animals?

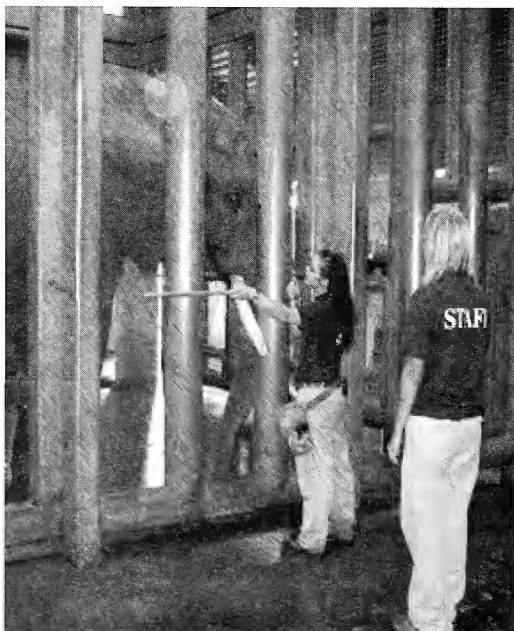
Have you ever trained an animal for a behavior, yet when another trainer requested the behavior there was a lack of response from the animal? Why did the animal not respond to the other trainer even though the same cue was given? There may be several correct answers to this question, but one that we have to consider is whether two trainers actually communicate the identical information to the animal.

When a primary trainer shows another trainer how to request a behavior, the cue (discriminative stimulus, or S^D) for that behavior is typically discussed between the two trainers. However, if we could ask the animal what the cue is, would the animal's description be identical to the trainers'? This is not likely. Animals interpret information differently than humans and observe many variables of which we may be unaware. Therefore, their description of cues would likely be very different than we would anticipate. A verbal cue is not just a word. It could be paired with a specific tone or volume. A hand signal is also accompanied by the rest of your body positioning. A tactile cue may have variances in the amount of pressure. All of these variables are information that we are communicating to our animals.

Have you ever trained an animal for a specific behavior, such as a front leg position, and an observer asks, "What's up with the hind leg?" Sometimes we are so focused on reinforcing a certain body part that we ignore the fact that we are also reinforcing all the other body parts. We are communicating that the front leg is in the correct position, but we are also informing the animal that everything else is in the correct position, whether it is or not. This is one of the ways that superstitious behaviors are created.

How do we, as trainers, become more aware of all the information that we are communicating to our animals? Following are some tips that will help us become more cognizant of everything we are communicating to our animals?

A) Have a second trainer observe sessions. This may be easier said than done. It may be difficult to coordinate routines to actually have a person available. It also makes many trainers very self conscious to have peers watch them train. If these obstacles can be overcome, having an extra set of eyes can be invaluable. The second person can focus on both the trainer and the animal and provide feedback about how and what information was communicated to the animal. A second person can also watch other parts of the animal while the trainer focuses on a specific area during the session. It is important to note that discussions with this second person should take place before or after the session takes place. Brief comments can be interjected as long as it does not interfere with the session. However, a side-bar conversation not only disrupts the flow of the session, but also adds to the variables the animal is observing. If the session is paused for no apparent reason, the animal might interpret this as punishment, or a time-out. The observer should silently observe and then provide feedback outside of the session.



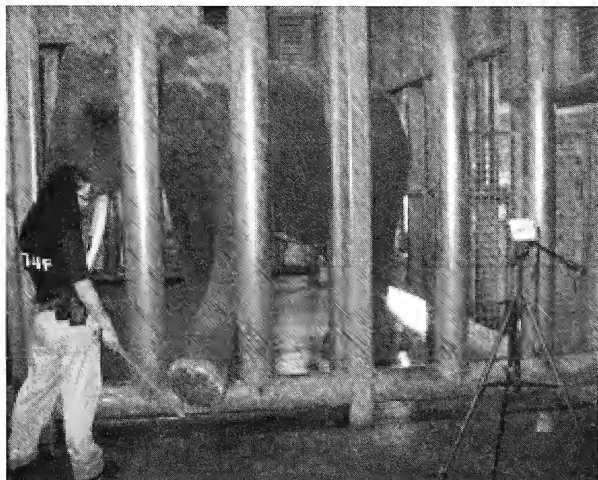
An observer can help a trainer polish skills by examining behavior of both trainer and animal.

(Photo by the author, Toronto Zoo)

B) Video tape sessions.

Although this doesn't provide immediate feedback, and extra time is needed to review the video, it offers the advantage of being able to watch the session many times. After reviewing sessions it is very common to hear trainers say "I didn't realize I did that" or "I didn't see the animal do that". Some animals are sensitive to the presence of a video tri-pod; therefore, desensitizing to the equipment may be necessary, but worth the effort in the long run.

C) Develop trainer 'awareness'. Begin concentrating on your own actions and body language,



Video taping helps trainers learn by watching themselves. *(Photo by the author, Toronto Zoo)*

starting with simple and well conditioned behaviors. Practice shifting your focus from the animal to yourself and your actions to determine what your body language communicates. As you gain confidence with this, do this with more complex behaviours and eventually while training new behaviors. It is a skill that becomes better with time. Eventually a trainer can develop this skill to a level where they can be extremely aware of both the animals and their actions during a session and how they mesh together.

If you consider these three training tips together, you can increase your awareness of communication between trainer and animal. It will also help promote consistency between trainers so that you are both 'speaking the same language' with the animals in your cues and reinforced criteria. As we mentioned last month, you may randomly see more tips like these in future ATC column entries as space allows. The AAZK Animal Training Committee (ATC) also has several training resources available on the AAZK, Inc website (www.aazk.org, look for the Committees link). If you have a specific question about animal training you are also welcome to contact us by way of the website link.

Reference: Pryor K. [1985]. *Don't Shoot the Dog*. Bantam Books, New York. Pp. 54-66.

Tampa's Lowry Park Zoo Explores Solar Power

Tampa's Lowry Park Zoo is planning to install a solar system that can generate enough clean energy to power the zoo's Skyfari sky ride and will be connected to the electric grid through the zoo's main power system.

The zoo will partner with Tampa Electric and the University of South Florida's Power Center for Utility Explorations to develop, design and test the 15-kilowatt solar photovoltaic system.

The project, which includes solar panels and an inverter, as well as educational displays that will be installed at the sky ride entrance, will cost approximately \$575,000. It will be funded in part by a grant from the Florida High Tech Corridor.



The interactive demonstration project will allow more than one million annual zoo visitors to find out more about solar power and encourage its use.

"All of the zoo's exhibits and programs are designed to engage and inspire visitors to treasure the natural world and act wisely on its behalf," said Lex Salisbury, the zoo's president and chief executive. "This partnership offers a great opportunity for the zoo to lead by example," Salisbury said. "By developing and testing a renewable solar energy system, we hope to reduce the impact on the environment by conserving conventional power."

The skyride at the Lowry Park Zoo will soon run on solar power. *(Photo by Rene Sanchez)*

"Our project seeks to deliver electric power that is not only reliable, but also compatible with a natural environment, in harmony with people and animals," said Alex Domijan, professor in the USF College of Engineering and director of the Power Center for Utility Explorations.

The partners will also examine ways to strengthen the electric grid to handle the reverse flow of electricity as a result of what could be a significant increase in renewable generation from larger loads or from a number of smaller systems. These additional loads from individual or business renewable energy sources have the potential to affect the reliability of electric service for neighboring customers.

Domijan explained, "Although the electricity grid has been designed for a one-way transfer of power from central station generators to consumers, with the distributed generation system being developed at the zoo using on-site renewable energy sources, such as photovoltaics, the grid's controls can be adapted for reverse power flows."

In Tampa, an increasing number of electricity customers are becoming interested in generating their own power from renewable resources such as the sun. In 2008, Tampa Electric customers added more than 110 kilowatts of solar energy to their homes and businesses.

Sources: Environment News Service and Zoo News Digest 8/6/08

Pangolins in Trouble – Future Uncertain

The pangolin may wear a suit of armour but that has not prevented it from ending up on dinner plates and medicinal stores. The Malayan pangolin (*Manis javanica*) or tenggiling in Malay is a little-known animal. This strange and rarely seen member of the family Manidae from the order Pholidota is an old-world creature once associated with anteaters, sloths and armadillos.

Once frequently encountered across Malaysia in rubber plantations and oil palm estates, pangolins are more commonly seen these days adorning dinner plates and traditional medicine shops in China.

This ground-dwelling, scaled animal measures close to 1m [3.28 ft.] in length and weighs about 2kg[4.4lbs.]. Completely covered from the neck to the tip of the tail (but not the face, throat and belly) with hard armour-like scales, this unusual creature more closely resembles the new-world armadillo. The scales are tough and made up of agglutinated hair, somewhat like the rhinoceros horn.

Equipped with a long prehensile tail, short powerful legs, tiny eyes and a slender, pointed head, this creature is very adept to its home on the forest floor. Rarely seen in the wild, this elusive species is more probably seen by the public lying dead on the road as a result of a motor accident.

Native to both South-East Asia and Africa, the pangolin prefers lowland to lower-montane forests up to an elevation of about 1,200m [-3900 ft.]. Its strong prehensile tail has several functions, one of which is to act as a support when the animal stands up tall on its hind legs and another is as an extra limb whilst foraging for food in the branches of trees.

The pangolin lives almost entirely on ants and termites. These it locates by scent using its long, flexible and highly sensitive snout. Occasionally, the pangolin eats other soft-bodied insects or grubs but it favours ants which it picks up frantically using its long, sticky tongue which can measure more than the length of its head and body. Amazingly, the pangolin can shoot its tongue out to lengths of up to 25cm [9.84 in.].

The tail is used as a support when the animal stands up on its hind legs whilst using its strong forelegs to tear open termite mounds. Superbly adapted for this type of feeding, the pangolin's face and eyes are protected by thick skin and eyelids. It also has the ability to open and close its nostrils, thus completely protecting itself from ant or termite attack.

Equally suited to trees as it is the ground, the pangolin is an excellent climber. It does this using a caterpillar-type motion: it holds the tree tightly with its fore legs and then brings its hind legs up and so on. It searches tree branches for its favourite food – the leaf nests of weaver ants.

Pangolins now face an uncertain future as humans decimate their population through trade in pangolin skin, leather, meat, scales and live animals. Most of these are destined for China. The pangolin trade is now a major industry. At this rate this animal must certainly be in serious danger of extinction.

In Vietnam it was reported in April that officials confiscated some 600 pangolins and 700 monitor lizards totalling 4.5 tons. The animals had been smuggled into Vietnam from Malaysia but, upon their discovery, neither the receivers nor the senders wanted to keep them. Vietnamese officials had no choice but to incinerate the animals after they "failed to adapt to their new habitat."

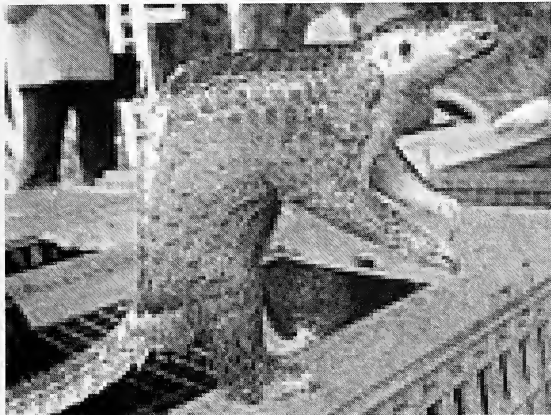


Dried pangolin scales seized from smugglers. The scales are much sought after for the preparation of traditional Chinese medicines.

The pangolin, a fully protected species, continues to be hunted for its exotic culinary and medicinal qualities.

A truck filled with 190 pangolins was recently confiscated by Thai authorities after entering Thailand from Malaysia. Shocking as it may seem, this is not a rare occurrence, with confiscations happening almost daily and numbers of animals reaching up to 500 in one load. Who is to say how many actually reach their destination and evade confiscation? Poachers have expanded their hunt for the mammals to Indonesia. Twenty-three tons of pangolin carcasses and scales were seized in Vietnam in March.

This trade is illegal but still it goes on. Traders from China apparently paying as much as RM 1,500



Hook the pangolin at the Singapore Zoo

(\$450US) per animal only encourage perpetrators to continue this illicit trade. There is high demand for scales in traditional Chinese medicines. They are thought to be a powerful antiseptic; medicines made from pangolin scales supposedly cure fevers, skin disorders and venereal diseases.

According to Chris Shepherd of TRAFFIC South-East Asia, a wildlife trade-monitoring organization, there is currently no legal international commercial trade of the pangolins. “The illegal trade in pangolins is largely out of control, with large shipments of animals being smuggled across numerous international borders, often by the lorry load, to their final destination in China.

“It is not known where all the pangolins are coming from. This is where the public has a role to play - in supplying the authorities with the information they need to complete this puzzle and to stop this large, illicit trade” said Shepherd.

Citing China’s appetite for exotic meats, Chris Shepherd, senior programme officer with Traffic South-East Asia, said the mammals ‘could become extinct at any time because captive breeding is impossible.’

‘They are one of the most heavily traded species in Asia despite a complete ban,’ *The Straits Times* quoted Shepherd as saying.

It is unfortunate that statistics on pangolins are missing in this country. Ask any organisation “What is the status of the pangolin population in Malaysia right now?” and the answer is ... no one can tell you. Sources: *The Tsar.Malaysia.online and Monsters & Critics/ScienceNews.com* 7-3-08

2007 AAZK Conference Proceedings Now Available for Download

The papers, posters and workshop summaries from the Galveston, TX 2007 National AAZK Conference are now available to download from the Member’s Only Section of the AAZK website (www.aazk.org) They are available either as a complete download of all materials or as individual papers in pdf format. Proceedings will not be published in hard copy, so this will be your only way to access these materials. If you are not currently registered on the Member’s Only Section of the AAZK website, you are encouraged to do so soon. You must be a current member of AAZK, Inc. in order to gain access to this section. Besides the Conference Proceedings, there is also lots of other good information available only to AAZK members in the Member’s Only Section. See Scoops & Scutbutt from the March 2008 issue of *AKF* for further information on what is currently available there. The AAZK Board, Staff and Committees will continue to add information to this section. So check back often to see what’s new!

Conservation/Legislative Update

Column Coordinators: Becky Richendollar, North Carolina Zoo
and Greg McKinney, Philadelphia PA

This month's column was put together by
column co-coordinator Greg McKinney



With the September issue being devoted to conservation-related topics, this month's column, with the exception of the first entry, is dedicated to these efforts. These items have been picked following no particular structure or guideline. Omission does not mean that an individual effort was considered less important. Although they are not aware that I have done so, I am greatly indebted to posters on the AAZK website forum as well as Peter Dickinson's Zoo-Biology listserv for providing me with information on many of these endeavors. These online forums provide an excellent opportunity for highlighting conservation plans, efforts and achievements.

Flawed U.S. Regulations on Captive Tigers, New Report Shows - Huge gaps in U.S. regulations could make tigers held in captivity a target for illegal trade, wildlife trade monitoring network TRAFFIC and WWF found in the first-ever comprehensive report into captive tiger regulations across the United States.

According to the report, *Paper Tigers?: The role of the U.S. captive Tiger population in the trade in Tiger parts*, the U.S. government has no way of knowing how many tigers there are in captivity within its borders, where they are, who owns them, or what happens to their body parts when they die. In many states there are no controls on individuals keeping tigers as pets. A registration scheme for all captive tigers and a means to monitor disposal of dead animals are urgently needed, says the report.

There are more than 5,000 tigers (*Panthera tigris*) estimated to be in captivity in the United States—more than the total wild population in Asia of around 4,000 animals. They include animals bred in zoos, used for entertainment in carnivals or promotional exhibits, housed at rescue facilities, and tigers that are privately owned. The United States and other member governments of CITES (the Convention on International Trade in Endangered Species of Wild Flora and Fauna) have previously agreed to a Resolution whereby all countries where tigers are bred in captivity should “ensure that adequate management practices and controls are in place to prevent [Tiger] parts and derivatives from entering illegal trade from or through such facilities.” The lack of a comprehensive management system for captive tigers is clear evidence the U.S. has not fully implemented this Resolution.

CITES also agreed that countries should not breed tigers on a commercial scale for trade in their body parts. Whilst the report found no current evidence of tiger breeding for body parts in the U.S., the lack of regulations create a clear potential for it to begin.

“As a leader in promoting the conservation of tigers, the United States has a responsibility to manage its captive tiger population effectively to prevent any emergence of illegal trade,” said Leigh Henry, programme officer for TRAFFIC North America and co-author of the report. “Any supply of tiger parts into the black market can stimulate trade and consumer demand, which could pose a serious threat to already dwindling wild tiger populations.”

Tiger populations are fast declining worldwide due to poaching for illegal trade and habitat and prey loss. One of their main threats is the global demand for their bones, skins and other body parts for use as ingredients in traditional Asian medicine and as fashion items. WWF and TRAFFIC recommend, among other steps, the federal government rescind exceptions to laws that exempt certain categories of captive U.S. tigers from regulation, specifically under the Captive-Bred Wildlife Registration system, and that all persons or facilities holding USDA licenses for exhibition or breeding and dealing in tigers report annually on the number of tigers held, births, mortality and transfer or sale.

The report, funded by the Save the Tiger Fund, can be found through the WWF website or form the

Year of the Frog - A crisis of enormous proportions faces the world's amphibian species. At present, we estimate that about one-third of the more than 6,000 known amphibian species are at risk of extinction. This likely underestimates the real number since data are lacking on many species from Africa, Southeast Asia, and other regions.

So say the AZA's Paul Boyle and Shelly Grow kicking off the spring issue of the USFWS' Endangered Species Bulletin (V. 33, No. 1). The issue is devoted almost entirely to amphibians and is available at the USFWS website: http://www.fws.gov/endangered/bulletin/2008/bulletin_spring2008.pdf.

The Amphibian Ark - The Amphibian Ark (<http://www.amphibianark.org/>), is a joint effort of the World Association of Zoos and Aquariums (WAZA), the IUCN/SSC Conservation Breeding Specialist Group (CBSG), and the IUCN/SSC Amphibian Specialist Group (ASG). Many videos and documents are available detailing the amphibian crisis and various efforts.

Living Green - The year 2008 is seeing an increasing number of zoos using innovative means in which to reduce waste and emissions and also expecting this of their vendors. Many zoos now have "going green" links off their websites and with these, as well as with in-house practice and signage, they are helping to increase knowledge and visibility to the issue.

- Toronto Zoo has plans to modify its lion-tailed macaque (*Macaca silenus*) exhibit's heating and cooling system to act in a more efficient manner and is using the exhibit modifications to inform people of geothermal technology. Source: Toronto Zoo, Ontario Ministry of Energy, The Canadian Press
- The Cincinnati Zoo's Harold C. Schott Education Center has received a silver rating from the national Leadership in Energy and Environmental Design program - one of only three zoos in the country to receive that high a rating, and one of only five such buildings in Ohio. Among the Schott Center's "green" energy features are solar panels, waterless urinals and low-flush toilets, extra layers of insulation, motion sensor light switches and rapid growing plants used for interior construction. Source: Green Energy Ohio
- The Wildlife Conservation Society's self-contained eco-restroom, featured in this Pulse video: <http://www.riverwired.com/video/poop-zoo-bronx-zoo%E2%80%99s-eco-restroom>, uses composting toilets (3 ounces per flush), gray water gardens, and educational graphics.
- The Philadelphia Zoo has created a new position. The Sustainability Programs Manager will focus on energy efficiency and carbon neutrality, as well as on implementing sustainable policies and practices that are integrated Zoo-wide and on sharing messages with our visitors on how they can follow in the Zoo's eco-friendly footsteps. The Zoo's Footprints program provides information to individuals on steps that they can take to fight climate change. The Zoo is involved with several reforestation projects at home and in Borneo. Source: Philadelphia Zoo
- Conservation International (CI) offers a link off of their website devoted to identify changes that can be made in individual behavior and consumer choices to contribute to the health of the planet. The direct link, http://www.conservation.org/act/live_green/Pages/default.aspx takes you to a page which has an online tool for measuring your eco-footprint and suggestions for action. From the home page for CI one can sign up to become a member of the online community and attend and submit questions to live chats. CI is home to a popular Protect an Acre program and hosts numerous programs worldwide.
- The Story of Stuff (<http://www.storyofstuff.com/>) is a website that contains fact sheets and suggestions for change, recommended reading, a blog and a 20-minute flash video, written and narrated by Annie Leonard and produced by Free Range Studios that looks at the underside of our production and consumption patterns. It exposes the connections between a huge number of environmental and social issues, and calls us together to create a more sustainable and just world.

Buy an Acre - Brazilian President Luis Inacio Lula da Silva has announced the founding of a international fund that will serve to protect the Amazon Rainforest. The Brazilian government will accept donations from developed countries to support conservation and sustainable development and conduct research into alternatives to forest-clearing. The measure will also serve to protect

indigenous people who are threatened by deforestation. The fund has been developed now that Brazilian authorities agree that deforestation is linked to global warming. While the Brazilian government is reportedly adamant that they will maintain control over the Amazon Rainforest, 65% of which is on Brazilian territory, they are enlisting the help of other nations for the task of its preservation. Their goal is to raise \$21 billion by 2021. Norway will be the first to donate with \$100 million in September. *Source: All Headline News, Amy Beeman, 2 August 2008*

Since its foundation in 1989 the World Land Trust (<http://www.worldlandtrust.org/>) has helped purchase and protect over 375,000 acres of threatened wildlife habitats. From their website one can link to different projects and to pages describing the wildlife which inhabit the large areas that have been purchased, said in perpetuity, for a donation of \$100.00 an acre.

Rainforest Action Network (<http://ran.org/>) established the Protect-an-Acre Fund in 1993 as a tool to protect the world's rainforests and the rights of their inhabitants by providing financial aid to traditionally underfunded organizations and communities in temperate, tropical and boreal forest regions. Protect-an-Acre projects prioritize gaining legal recognition of indigenous territories (a process called "demarcation"), establishment of protected reserves that recognize the rights of local communities, the development of locally-based alternative economic initiatives, community organization, environmental education, and resistance to destructive practices such as logging, fossil fuel development and large-scale infrastructure projects in forest areas.

Over a hundred different zoos and aquariums support the work of the Center for Ecosystem Survival (<http://savenature.org/>) through use of its Conservation Parking Meters or involvement with its Adopt an Acre and Adopt a Reef programs. CES has been successful in raising over \$2 million to protect rainforests and coral reefs in Central and South America.

Highly praised for its scientific approach for determining areas of greatest significance (http://www.nature.org/aboutus/howwework/cbd/files/cbd_brochure_en.pdf), The Nature Conservancy was founded in 1951. Since that time it has been responsible for protecting over 100 million acres of land, 5,000 miles of river and a huge number of marine conservation projects.

Just a Few - Wildlife At Risk (<http://www.wildlifeatrisk.org>) is dedicated to the long-term conservation of Vietnam's threatened biodiversity. It aims to reduce the pressure on Vietnam's wildlife by helping to build local capacity to implement legislation, raise environmental awareness and develop alternatives to the unsustainable exploitation of Vietnam's natural resources.

- The Australian based, Free the Bears Fund (<http://www.freethebears.org.au/>), founded by Mary Hutton to protect, preserve and enrich the lives of bears throughout the world, has been responsible for rescuing nearly 600 bears from the streets of Asia. Over 400 of these bears have been sloth bears (*Melursus ursinus*) rescued from India's dancing bear trade. The fund has worked with local and international zoos and animal welfare groups to place bears, build enclosures and contribute towards the development and maintenance of sanctuaries.

- The Southern African Foundation for the Conservation of Coastal Birds (SANCCOB) (<http://www.sanccob.co.za/index.htm>) was founded in 1968 following the Esso Eseen spill off Cape Point, South Africa. Since its origin SANCCOB has worked to raise awareness about conservation and rehabilitated more than 83,000 ill, injured, orphaned and oiled sea birds.

- Working together with the Rwandan government, the Great Ape Trust of Iowa (<http://www.greatapetrust.org/>) and Earthpark (<http://www.earthpark.org/>) have announced that the Gishwati Forest Reserve is the future site of the Rwanda National Conservation Park, setting into motion one of Africa's most ambitious forest restoration and ecological research efforts ever. *Sources: Great Ape Trust and Earthpark websites*

- A Wildlife Conservation Society study that showed Alaska's bears are vulnerable to climate change helped inform the recent decision by the U.S. Fish and Wildlife Service to list the polar bear as Threatened under the federal Endangered Species Act. In addition to protecting the polar bear under the ESA, WCS is also calling for greater international cooperation to protect polar bears, which can travel across country borders in pursuit of food, denning sites, and mates. The study can be found on the WCS website or through this direct link: http://www.usgs.gov/newsroom/special/polar_bears/docs/USGS_PolarBear_Bergen_Movements_lowres.pdf

AAZK Membership Application (Please Print)

check here if renewal []

Name _____

Email

Mailing Address _____

City _____ State/Province _____ Zip/Postal Code _____ Country _____



U.S. Members

\$40.00 Professional

Full-time Keepers



\$35.00 Affiliate

*Other staff & volunteers, or
those interested in the profession
but not associated with a zoo or aquarium*



\$25.00 Student

*Must supply a copy of current student
ID at time of application*



**\$65.00 or up - Individuals
Contributing/U.S.**



\$125.00 or up

Institutional/U.S.
(requires Board approval)



\$125.00 Commercial Members
(i.e. Animal-related food & supplies)



International Members

\$55.00 International

All members outside U.S. & Canada regardless of category



Canadian Members

\$40.00 Professional

Full-time Keepers



\$40.00 Affiliate

*Other staff & volunteers or
those interested in the profession
but not associated with a zoo or aquarium*



\$25.00 Student

*Must supply a copy of current student
ID at time of application*



**\$65.00 or up - Individuals
Contributing/Canada**



\$125.00 or up

Institutional/Canada
(requires Board approval)



Library Only *Available ONLY to public &
university libraries (in U.S.)*
\$40.00 Library

Zoo Affiliation (if any) _____

Zoo Address _____

Title _____



My check is enclosed (AAZK, Inc.)
(U.S. Funds Only)



Please charge my credit card

MASTERCARD VISA Card # _____ - _____ - _____ - _____

Name on card _____ Expiration date _____

Signature _____

Mail this application to: AAZK Administrative Offices, 3601 S.W. 29th, Suite 133 Topeka, KS 66614-2054.
Make checks/money orders payable to AAZK, Inc. Must be in U. S. FUNDS ONLY. Membership includes a
subscription to *Animal Keepers' Forum*. The membership card is good for free or discounted admission to many
zoos and aquariums in the U.S. and Canada.

PRINTED IN U.S.A.
© 2008 AAZK, INC.



**AMERICAN
ASSOCIATION
of ZOO KEEPERS**

3601 S. W. 29th St.
Suite 133
Topeka, KS
66614-2054
U.S.A.

Return Service Requested

*"Dedicated to
Professional Animal Care"*

SMITHSONIAN INSTITUTION LIBRARIES



3 9088 01463 1360



Animal Keepers' Forum
34th Anniversary
1974 - 2008



*****AUTO**MIXED AADC 66340

5

9/09
NATIONAL ZOO LIBRARY
VISITORS CENTER - MRC551
PO BOX 37012
WASHINGTON DC 20013-7012